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* * * * * * * * *   Welcome to STN International   * * * * * * * * *

 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3   FEB 28  PATDPAFULL - New display fields provide for legal status
                   data from INPADOC
 NEWS  4   FEB 28  BABS - Current-awareness alerts (SDIs) available
 NEWS  5   MAR 02  GBFULL: New full-text patent database on STN
 NEWS  6   MAR 03  REGISTRY/ZREGISTRY - Sequence annotations enhanced
 NEWS  7   MAR 03  MEDLINE file segment of TOXCENTER reloaded
 NEWS  8   MAR 22  KOREAPAT now updated monthly; patent information enhanced
 NEWS  9   MAR 22  Original IDE display format returns to REGISTRY/ZREGISTRY
 NEWS  10  MAR 22  PATDPASPC - New patent database available
 NEWS  11  MAR 22  REGISTRY/ZREGISTRY enhanced with experimental property tags
 NEWS  12  APR 04  EPFULL enhanced with additional patent information and new
                   fields
 NEWS  13  APR 04  EMBASE - Database reloaded and enhanced
 NEWS  14  APR 18  New CAS Information Use Policies available online
 NEWS  15  APR 25  Patent searching, including current-awareness alerts (SDIs),
                   based on application date in CA/CAplus and USPATFULL/USPAT2
                   may be affected by a change in filing date for U.S.
                   applications.
 NEWS  16  APR 28  Improved searching of U.S. Patent Classifications for
                   U.S. patent records in CA/CAplus
 NEWS  17  MAY 23  GBFULL enhanced with patent drawing images
 NEWS  18  MAY 23  REGISTRY has been enhanced with source information from
                   CHEMCATS
 NEWS  19  JUN 06  The Analysis Edition of STN Express with Discover!
                   (Version 8.0 for Windows) now available
 NEWS  20  JUN 13  RUSSIAPAT: New full-text patent database on STN
 NEWS  21  JUN 13  FRFULL enhanced with patent drawing images
 NEWS  22  JUN 27  MARPAT displays enhanced with expanded G-group definitions
                   and text labels
 NEWS  23  JUL 01  MEDICONF removed from STN
 NEWS  24  JUL 07  STN Patent Forums to be held in July 2005
 NEWS  25  JUL 13  SCISEARCH reloaded
 NEWS  26  JUL 20  Powerful new interactive analysis and visualization software,
                   STN AnaVist, now available
 NEWS  27  AUG 11  Derwent World Patents Index(R) web-based training during
                   August
 NEWS  28  AUG 11  STN AnaVist workshops to be held in North America
 NEWS  29  AUG 30  CA/CAplus -Increased access to 19th century research documents
 NEWS  30  AUG 30  CASREACT - Enhanced with displayable reaction conditions

 NEWS EXPRESS  JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005

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FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005

=> file uspatful
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 6 Sep 2005 (20050906/PD)
FILE LAST UPDATED: 6 Sep 2005 (20050906/ED)
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HIGHEST GRANTED PATENT NUMBER: US6941576
HIGHEST APPLICATION PUBLICATION NUMBER: US2005193458
CA INDEXING IS CURRENT THROUGH 6 Sep 2005 (20050906/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 6 Sep 2005 (20050906/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

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>>> publications, starting in 2001, for the inventions covered in <<<
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>>> /PK, etc. <<<

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>>> classifications, or claims, that may potentially change from <<<
>>> the earliest to the latest publication. <<<

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substance identification.

=> e sia charles/in
E1 1 SI YONGCHAO/IN
E2 1 SI YUJUN/IN
E3 4 --> SIA CHARLES/IN
E4 10 SIA CHARLES D Y/IN
E5 2 SIA CHARLES DWO YUAN/IN
E6 5 SIA CHOON BENG/IN
E7 1 SIA DW O SLASHED YUAN CHARLES/IN
E8 1 SIA DWE YUAN CHARLES/IN
E9 2 SIA DWO YUAN CHARLES/IN
E10 1 SIA JOSEPH B/IN
E11 1 SIA SAMUEL K/IN
E12 1 SIA SOPHIA/IN

=> s e3-e5
4 "SIA CHARLES"/IN
10 "SIA CHARLES D Y"/IN
2 "SIA CHARLES DWO YUAN"/IN
L1 16 ("SIA CHARLES"/IN OR "SIA CHARLES D Y"/IN OR "SIA CHARLES DWO YUAN"/IN)

=> d l1,cbib,1-16

L1 ANSWER 1 OF 16 USPATFULL on STN
2005:117616 Peptide-based diagnostic reagents for SARS.
Wang, Chang Yi, Cold Spring Harbor, NY, UNITED STATES
Fang, Xinde, Fresh Meadows, NY, UNITED STATES
Chang, Tseng Yuan, West Islip, NY, UNITED STATES
Liu, Scott, Lake Grove, NY, UNITED STATES
Lynn, Shugene, Taoyuan, TAIWAN, PROVINCE OF CHINA
Sia, Charles, North York, CANADA
US 2005100883 A1 20050512
APPLICATION: US 2003-712812 A1 20031112 (10)
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 2 OF 16 USPATFULL on STN
2004:12667 Enhancing the immune response to an antigen by presensitzing with an inducing agent prior to immunizing with the agent and the antigen.
Emtage, Peter, Boston, MA, UNITED STATES
Barber, Brian H., Mississauga, CA, UNITED STATES
Sambhara, Suryprakash, Decatur, GA, UNITED STATES
Sia, Charles Dwo Yuan, Toronto, CANADA
US 2004009185 A1 20040115
APPLICATION: US 2003-168417 A1 20030520 (10)
WO 2001-CA5 20010105
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 3 OF 16 USPATFULL on STN
2003:37601 Immunogenic peptides derived from prostate-specific membrane antigen (PSMA) and uses thereof.
Pedyczak, Artur, Pickering, CANADA
Chong, Pele, Richmond Hill, CANADA
Sia, Charles D. Y., Toronto, CANADA
US 2003027246 A1 20030206
APPLICATION: US 2001-821734 A1 20010330 (9)
PRIORITY: US 2000-193386P 20000331 (60)
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 4 OF 16 USPATFULL on STN
2002:243782 Immunogenic peptides derived from prostate-specific antigen (PSA) and uses thereof.
Pedyczak, Artur, Pickering, CANADA
Chong, Pele, Richmond Hill, CANADA
Sia, Charles Dwo Yuan, Toronto, CANADA
US 2002132976 A1 20020919
APPLICATION: US 2001-829004 A1 20010410 (9)
PRIORITY: US 2000-195456P 20000410 (60)
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 5 OF 16 USPATFULL on STN
2002:122616 Expressing gp140 fragment of primary HIV-1 isolate.
Sia, Charles D. Y., Thornhill, CANADA
Cao, Shi Xian, Etobicoke, CANADA
Persson, Roy, North York, CANADA
Rovinski, Benjamin, Thornhill, CANADA
Aventis Pasteur Limited, Toronto, CANADA (non-U.S. corporation)
US 6395714 B1 20020528
APPLICATION: US 1999-256194 19990224 (9)
DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 6 OF 16 USPATFULL on STN
2001:150268 HIV-SPECIFIC CYTOTOXIC T-CELL RESPONSES.
SIA, CHARLES D. Y., THORNHILL, Canada
CHONG, PELE, RICHMOND HILL, Canada
KLEIN, MICHEL H., WILLOWDALE, Canada
US 2001019714 A1 20010906
APPLICATION: US 1998-55744 A1 19980407 (9)
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 7 OF 16 USPATFULL on STN
2000:10008 Synthetic Haemophilus influenzae conjugate vaccine.
Chong, Pele, Richmond Hill, Canada
Kandil, Ali, Willowdale, Canada
Sia, Charles, Thornhill, Canada
Klein, Michel, Willowdale, Canada
Connaught Laboratories Limited, Willowdale, Canada (non-U.S. corporation)
US 6018019 20000125
WO 9315205 19930805
APPLICATION: US 1994-256839 19941003 (8)
WO 1993-CA41 19930203 19941003 PCT 371 date 19941003 PCT 102(e) date
PRIORITY: GB 1992-2219 19920203
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 8 OF 16 USPATFULL on STN
1999:132241 Synthesis of polyribosylribitol phosphate oligosaccharides.
Chong, Pele, Richmond Hill, Canada
Kandil, Ali, Willowdale, Canada
Sia, Charles, Thornhill, Canada
Klein, Michel, Willowdale, Canada
Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5972349 19991026
APPLICATION: US 1995-475985 19950607 (8)
PRIORITY: GB 1992-2219 19920302
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 9 OF 16 USPATFULL on STN
1999:109976 Tandem synthetic HIV-1 peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada

Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5951986 19990914
APPLICATION: US 1995-467881 19950606 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 10 OF 16 USPATFULL on STN
1999:27198 Tandem synthetic HIV-1 Peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, Willowdale, Canada (non-U.S. corporation)
US 5876731 19990302
APPLICATION: US 1995-462507 19950605 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 11 OF 16 USPATFULL on STN
1998:122503 Tandem synthetic HIV-1 peptide.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5817754 19981006
APPLICATION: US 1995-464329 19950605 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 12 OF 16 USPATFULL on STN
1998:104398 Tandem synthetic HIV-1 peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, Willowdale, Canada (non-U.S. corporation)
US 5800822 19980901
APPLICATION: US 1995-465217 19950605 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 13 OF 16 USPATFULL on STN
1998:98975 Tandem synthetic HIV-1 peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5795955 19980818
APPLICATION: US 1995-463966 19950605 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 14 OF 16 USPATFULL on STN
1998:61389 Tandem synthetic HIV-1 peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5759769 19980602
APPLICATION: US 1995-460602 19950602 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 15 OF 16 USPATFULL on STN
97:96561 Synthetic Haemophilus influenzae conjugate vaccine.
Chong, Pele, Richmond Hill, Canada
Kandil, Ali, Willowdale, Canada
Sia, Charles, Thornhill, Canada
Klein, Michel, Willowdale, Canada
Connaught Laboratories Limited, Willowdale, Canada (non-U.S. corporation)
US 5679352 19971021
APPLICATION: US 1995-475989 19950607 (8)
PRIORITY: GB 1992-2219 19920302
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 16 OF 16 USPATFULL on STN
97:52100 Tandem synthetic HIV-1 peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada

Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5639854 19970617
APPLICATION: US 1994-257528 19940609 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d l1,cbib,clm,1-16

L1 ANSWER 1 OF 16 USPATFULL on STN
2005:117616 Peptide-based diagnostic reagents for SARS.
Wang, Chang Yi, Cold Spring Harbor, NY, UNITED STATES
Fang, Xinde, Fresh Meadows, NY, UNITED STATES
Chang, Tseng Yuan, West Islip, NY, UNITED STATES
Liu, Scott, Lake Grove, NY, UNITED STATES
Lynn, Shugene, Taoyuan, TAIWAN, PROVINCE OF CHINA
Sia, Charles, North York, CANADA
US 2005100883 A1 20050512
APPLICATION: US 2003-712812 A1 20031112 (10)
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. A method of detecting SCoV antibodies in a patient sample comprising: a) contacting said patient sample with one or more SCoV antigenic peptides selected from the group consisting of SEQ ID NOS: 1, 5, 7, 9, and 12 or immunologically functional analogues thereof selected from the group consisting of SEQ ID NOS: 2, 3, 4, 6, 8, 10, 11, 13, 14, and 15 under conditions conducive to binding; and b) measuring binding between said patient sample and said SCoV antigenic peptides or immunologically functional analogues thereof; wherein detection of binding between said patient sample and said SCoV antigenic peptides or immunologically functional analogues thereof indicates the presence of SCoV antibodies in said patient sample.

2. The method of claim 1 wherein said one or more SCoV antigenic peptides or immunologically functional analogues thereof are attached to a solid phase prior to contact with said patient sample.

3. The method of claim 1 wherein said patient sample is selected from the group consisting of blood, serum, plasma, saliva, urine, mucus, fecal matter, and tissue extract.

4. A method of detecting SCoV antibodies in a patient sample comprising: a) contacting said patient sample with one or more immunologically functional analogues of any of the SCoV antigenic peptides selected from the group consisting of SEQ ID NOS: 1, 5, 7, 9, and 12 under conditions conducive to binding, wherein said on or more immunologically functional comprises one or more of the following modifications when compared to said SCoV antigenic peptides: i) a deletion of 10 amino acids or less at the N-terminus or C-terminus; ii) an addition of 15 amino acids or less at the N-terminus or C-terminus; iii) one or more conservative substitutions; iv) an addition of a branched structure at the C-terminus; v) covalent attachment to another moiety; vi) an altered charge; and vii) one or more conservative or non-conservative substitutions such that the sequence of said immunologically functional analogue is the sequence of a strain of SCoV other than the Tor2 isolate of SCoV; and b) measuring binding between said patient sample and said immunologically functional analogues; wherein detection of binding between said patient sample and said immunologically functional analogues indicates the presence of SCoV antibodies in said patient sample.

5. The method of claim 4 wherein said one or more SCoV antigenic peptides or immunologically functional analogues thereof are attached to a solid phase prior to contact with said patient sample.

6. The method of claim 4 wherein said patient sample is selected from the group consisting of blood, serum, plasma, saliva, urine, mucus, fecal matter, and tissue extract.

7. A peptide selected from the group consisting of SEQ ID NOS: 1-15.

8. A nucleic acid molecule that encodes a peptide of any of SEQ ID NOS:1-15 or a complement thereof.

9. A vector comprising a nucleic acid molecule of claim 8.

10. The vector of claim 9 that is an expression vector.

11. An immunologically functional analogue of an SCoV antigenic peptide of any one of SEQ ID NOS:1, 5, 7, 9, and 12 wherein said immunologically functional analogue comprises one or more of the following modifications when compared to the corresponding SCoV antigenic peptide: a) a deletion of 10 amino acids or less at the N-terminus or C-terminus; b) an addition of 15 amino acids or less at the N-terminus or C-terminus; c) one or more conservative substitution; d) an addition of a branched structure at the C-terminus; e) covalent attachment to another moiety; f) an altered charge; and g) one or more conservative or non-conservative substitutions such that the sequence of said immunologically functional analogue is the sequence of a strain of SCoV other than the Tor2 isolate of SCoV.

12. A nucleic acid molecule that encodes a peptide of claim 11 or a complement thereof.

13. A vector comprising a nucleic acid molecule of claim 12.

14. The vector of claim 13 that is an expression vector.

L1 ANSWER 2 OF 16 USPATFULL on STN
2004:12667 Enhancing the immune response to an antigen by presensitzing with an inducing agent prior to immunizing with the agent and the antigen.
Emtage, Peter, Boston, MA, UNITED STATES
Barber, Brian H., Mississauga, CA, UNITED STATES
Sambhara, Suryprakash, Decatur, GA, UNITED STATES
Sia, Charles Dwo Yuan, Toronto, CANADA
US 2004009185 A1 20040115
APPLICATION: US 2003-168417 A1 20030520 (10)
WO 2001-CA5 20010105
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A method of enhancing an immune response to an antigen in an animal comprising (a) administering an effective amount of an inducing agent to the animal followed by (b) administering an effective amount of the inducing agent and the antigen to the animal.

2. A method according to claim 1 wherein the inducing agent is a bacterial toxoid.

3. A method according to claim 2 wherein the bacterial toxoid is tetanus toxoid or diphtheria toxoid.

4. A method according to any one of claims 1 to 3 wherein the antigen is a protein.

5. A method according to claim 4 wherein the antigen is selected from the group consisting of tumor antigens, autoimmune antigens and an antigen isolated from a pathogenic organism.

6. A method according to claim 5 wherein the tumor antigen is selected from the group consisting of gp100, carcinoembryonic antigen, tyrosinase, TRP-1, TRP-2, MART-1/Melan A, MAGE family, BAGE family, GAGE family, RAGE family, KSA, NY ESO-1, MUC-1, MUC-2, p53, p185, HER2/neu, PSA and PSMA and modified forms thereof.

7. A method according to claim 5 wherein the tumor antigen is gp100 or carcinoembryonic antigen or a modified form thereof.

8. A method according to claim 7 wherein the antigen is GP100 or modified gp100 having the sequence as shown in FIG. 2 (SEQ.ID.NO.:2).

9. A method according to claim 7 wherein the antigen is carcinoembryonic antigen (CEA) or modified CEA having the sequence shown in FIG. 3 (SEQ.ID.NO.:4).

10. A method according to any one of claims 1-9 wherein the antigen is administered as a nucleic acid sequence encoding the antigen.

11. A method according to claim 10 wherein the nucleic acid sequence is in a vector, plasmid or bacterial DNA.

12. A method according to claim 11 wherein the vector is a viral vector.

13. A method according to claim 12 wherein the viral vector is selected from adenovirus, alphavirus, and poxvirus.

14. A method according to claim 13 wherein the poxvirus is selected from the group consisting of vaccinia, fowlpox and avipox.

15. A method of claim 14 wherein the poxvirus is selected from the group comprising TROVAC, ALVAC, NYVAC, and MVA.

16. A method according to any one of claims 1 to 15 wherein step (b) occurs from about 3 weeks to about 6 weeks after step (a).

17. A method according to any one of claims 1 to 15 wherein step (b) occurs from about 3 weeks to about 4 weeks after step (a).

18. A method according to any one of claims 1 to 17 further comprising (c) administering a second dose of the inducing agent and the antigen.

19. A method according to claim 18 wherein step (c) occurs from about 3 weeks to about 6 we ks after step (b).

20. A method according to claim 18 wherein step (c) occurs from about 3 weeks to about 4 weeks after step (b).

21. A method according to any one of claims 1-20 wherein the antigen is administered in combination with at least one member selected from the group consisting of cytokines, lymphokines, co-stimulatory molecules, and nucleic acids coding therefor.

22. A method according to any one of claims 1-21 wherein the antigen is administered in combination with an adjuvant.

23. A method according to any one of claims 1-22 wherein the inducing agent is tetanus toxoid or diphtheria toxoid and the antigen is a tumor antigen.

24. A method according to claim 23 for the treatment of cancer.

25. A vaccine composition comprising an inducing agent and an antigen.

26. A use of a vaccine composition according to claim 25 to enhanc an immune response.

L1 ANSWER 3 OF 16 USPATFULL on STN
2003:37601 Immunogenic peptides derived from prostate-specific membrane antigen (PSMA) and uses thereof.
Pedyczak, Artur, Pickering, CANADA
Chong, Pele, Richmond Hill, CANADA
Sia, Charles D. Y., Toronto, CANADA
US 2003027246 A1 20030206
APPLICATION: US 2001-821734 A1 20010330 (9)
PRIORITY: US 2000-193386P 20000331 (60)
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A prostate specific membrane antigen (PSMA) derived peptide that is capable of eliciting an immune response comprising a sequence of the Formula I: $X\text{-}X_{1}\text{-}x\text{-}x\text{-}x\text{-}x\text{-}x\text{-}x\text{-}x_{2}$ wherein each X_1 is independently selected from leucine or methionine; each X_2 is independently selected from valine or leucine; and each X is independently selected from any amino acid, and fragments, elongations, analogs or derivatives of the PSMA derived peptide.

2. A PSMA derived peptide according to claim 1 selected from the group consisting of LLHETDSAV (SEQ ID NO: 1), VLAGGFFLL (SEQ ID NO: 2), ELAHYDVLL (SEQ ID NO: 3), LMYSLVHNL (SEQ ID NO: 4), MMNDQLMFL (SEQ ID NO: 5) and ALFDIESKV (SEQ ID NO: 6), or a fragment, analog, derivative or elongation of the PSMA derived peptide.

3. A PSMA derived peptide according to claim 1 selected from the group consisting of LLHETDSAV (SEQ ID NO: 1), VLAGGFFLL (SEQ ID NO: 2), ELAHYDVLL (SEQ ID NO: 3), LMYSLVHNL (SEQ ID NO: 4), MMNDQLMFL (SEQ ID NO: 5) and ALFDIESKV (SEQ ID NO: 6).

4. A fusion protein comprising the PSMA peptide as described in claim 1.

5. A nucleic acid molecule encoding a PSMA derived peptide according to claim 1.

6. A nucleic acid molecule encoding a PSMA derived peptide according to claim 5 comprising: (a) a nucleic acid sequence as shown in any one of

SEQ ID NOS: 12-17 wherein T can also be U; (b) a nucleic acid sequence that is complementary to a nucleic acid sequence of (a); (c) a nucleic acid sequence that has substantial sequence homology to a nucleic acid sequence of (a) or (b); (d) a nucleic acid sequence that is an analog of a nucleic acid sequence of (a), (b) or (c); or (e) a nucleic acid sequence that hybridizes to a nucleic acid sequence of (a), (b), (c) or (d) under stringent hybridization conditions.

7. A nucleic acid molecule encoding a PSMA derived peptide according to claim 5 having a sequence selected from the group consisting of: SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; and SEQ ID NO: 17.

8. An expression vector comprising a nucleic acid molecule of claim 5 and regulatory sequences suitable for expression of the nucleic acid molecule.

9. A host cell transformed with an expression vector of claim 8.

10. A composition for eliciting an immune response in an animal comprising an effective amount of a peptide according to claim 1 in admixture with a suitable diluent or carrier.

11. The composition of claim 10 further comprising an adjuvant.

12. A composition for eliciting an immune response in an animal comprising an effective amount of a nucleic acid according to claim 5 in admixture with a suitable diluent or carrier.

13. The composition of claim 12 further comprising an adjuvant.

14. A use of an effective amount of a peptide according to claim 1 to prepare a medicament to elicit an immune response in an animal.

15. A use of an effective amount of a fusion protein according to claim 4 to elicit an immune response in an animal.

16. A use of an effective amount of a nucleic acid molecule according to claim 5 to prepare a medicament to elicit an immune response in an animal.

17. A use of an effective amount of a composition according to claim 10 to prepare a medicament to elicit an immune response in an animal.

18. A use of an effective amount of a peptide according to claim 1 to prepare a medicament to treat cancer.

19. A use of an effective amount of a fusion protein according to claim 4 to prepare a medicament to treat cancer.

20. A use of an effective amount of a nucleic acid molecule according to claim 5 to prepare a medicament to treat cancer.

21. A use of an effective amount of a composition according to claim 10 to prepare a medicament to treat cancer.

22. A use according to claim 18 wherein the cancer is prostate cancer.

L1 ANSWER 4 OF 16 USPATFULL on STN
2002:243782 Immunogenic peptides derived from prostate-specific antigen (PSA) and uses thereof.
Pedyczak, Artur, Pickering, CANADA
Chong, Pele, Richmond Hill, CANADA
Sia, Charles Dwo Yuan, Toronto, CANADA
US 2002132976 A1 20020919
APPLICATION: US 2001-829004 A1 20010410 (9)
PRIORITY: US 2000-195456P 20000410 (60)
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A prostate-specific antigen (PSA) derived peptide that is capable of eliciting an immune response comprising a sequence of the Formula I:
X_n--X_1--X--X--X--X--X--X--X_2 wherein n=0 or 1; each
X_1 is independently selected from leucine or methionine; each
X_2 is independently selected from valine or leucine; and each X is independently selected from any amino acid, and fragments, elongations, analogs or derivatives of the PSA derived peptide.

2. A PSA derived peptide according to claim 1 selected from the group consisting of MWVPVVFL (SEQ ID NO: 1), VLVHPQWVL (SEQ ID NO: 2), and KLQCVDLHV (SEQ ID NO: 3), or a fragment, analog, derivative or elongation of the PSA derived peptide.

3. A PSA derived peptide according to claim 1 selected from the group consisting of MWVVVFL (SEQ ID NO: 1), VLVHPQWVL (SEQ ID NO: 2), and KLQCVDLHV (SEQ ID NO: 3).

4. A fusion protein comprising the PSA peptide as described in claim 1.

5. A nucleic acid molecule encoding a PSA derived peptide according to claim 1.

6. A nucleic acid molecule encoding a PSA derived peptide according to claim 5 comprising: (a) a nucleic acid sequence as shown in any one of SEQ ID NOS:7-9 wherein T can also be U; (b) a nucleic acid sequence that is complementary to a nucleic acid sequence of (a); (c) a nucleic acid sequence that has substantial sequence homology to a nucleic acid sequence of (a) or (b); (d) a nucleic acid sequence that is an analog of a nucleic acid sequence of (a), (b) or (c); or (e) a nucleic acid sequence that hybridizes to a nucleic acid sequence of (a), (b), (c) or (d) under stringent hybridization conditions.

7. A nucleic acid molecule encoding a PSA derived peptide according to claim 5 having a sequence selected from the group consisting of: SEQ ID NO:7; SEQ ID NO:8; and SEQ ID NO:9.

8. An expression vector comprising a nucleic acid molecule of claim 5 and regulatory sequences suitable for expression of the nucleic acid molecule.

9. A host cell transformed with an expression vector of claim 8.

10. A composition for eliciting an immune response in an animal comprising an effective amount of a peptide according to claim 1 in admixture with a suitable diluent or carrier.

11. The composition of claim 10 further comprising an adjuvant.

12. A composition for eliciting an immune response in an animal comprising an effective amount of a nucleic acid according to claim 5 in admixture with a suitable diluent or carrier.

13. The composition of claim 12 further comprising an adjuvant.

14. A method of eliciting an immune response in an animal comprising administering an effective amount of a peptide according to claim 1 to the animal.

15. A method of eliciting an immune response in an animal comprising administering an effective amount of a fusion protein according to claim 4 to the animal.

16. A method of eliciting an immune response in an animal comprising administering an effective amount of a nucleic acid molecule according to claim 5 to the animal.

17. A method of eliciting an immune response in an animal comprising administering an effective amount of a composition according to claim 10 to the animal.

18. A method of treating cancer comprising administering to an animal an effective amount of a peptide according to claim 1.

19. A method of treating cancer comprising administering to an animal an effective amount of a fusion protein according to claim 4.

20. A method of treating cancer comprising administering to an animal an effective amount of a nucleic acid molecule according to claim 5.

21. A method of treating cancer comprising administering to an animal an effective amount of a composition according to claim 10.

22. A method according to claim 18 wherein the cancer is prostate cancer.

2002:122616 Expressing gp140 fragment of primary HIV-1 isolate.
Sia, Charles D. Y., Thornhill, CANADA
Cao, Shi Xian, Etobicoke, CANADA
Persson, Roy, North York, CANADA
Rovinski, Benjamin, Thornhill, CANADA
Aventis Pasteur Limited, Toronto, CANADA (non-U.S. corporation)
US 6395714 B1 20020528
APPLICATION: US 1999-256194 19990224 (9)
DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A method of generating a cytotoxic T-cell response in a host, which comprises administering to the host an immunogenic composition comprising a plasmid vector comprising a gene encoding the extracellular fragment of gp140 of the primary HIV-1 isolate BX08 under the control of a promoter which expresses the gene product in the host.

2. The method of claim 1, wherein the promoter is the cytomegalovirus promotor.

3. The method of claim 1 wherein the plasmid vector is pCMV.gp140.BX08 (ATCC No. 203839).

4. A vector which is pCMV.gp140.BX08 (ATCC No. 203839), as shown in FIG. 1.

5. An immunogenic composition comprising a vector which is pCMV.gp140.BX08 (ATCC No. 203839).

6. The immunogenic composition of claim 5 formulated for intramuscular immunization with a pharmaceutically-acceptable liquid carrier.

7. The immunogenic composition of claim 5 formulated for gene gun delivery with gold particles.

L1 ANSWER 6 OF 16 USPATFULL on STN
2001:150268 HIV-SPECIFIC CYTOTOXIC T-CELL RESPONSES.
SIA, CHARLES D. Y., THORNHILL, Canada
CHONG, PELE, RICHMOND HILL, Canada
KLEIN, MICHEL H., WILLOWDALE, Canada
US 2001019714 A1 20010906
APPLICATION: US 1998-55744 A1 19980407 (9)
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A method of generating an HIV-specific cytotoxic T-cell (CTL) response in a host, which comprises: administering to the host a T-helper molecule to prime T-helper cells of the immune system of the host, and subsequently administering to the host a mixture of said T-helper molecule and a T-cell inducing HIV-derived molecule to generate an HIV-specific T-cell response in the host.

2. The method of claim 1 wherein said T-helper molecule is selected from HLA class II restricted T-helper epitopes.

3. The method of claim 2 wherein said T-helper epitopes are selected from the group consisting of DP, DR and DQ-specific T-cell epitopes.

4. The method of claim 2 wherein said T-helper molecule is CLP-243 (SEQ ID NO:10).

5. The method of claim 1 wherein said T-helper molecule is administered with an adjuvant.

6. The method of claim 1 wherein said T-cell inducing HIV-derived molecule includes a peptide corresponding to a portion of an HIV-1 antigen and containing at least one T-cell epitope.

7. The method of claim 5 wherein said peptide correspond to sequences of the Rev protein of HIV-1.

8. The method of claim 6 wherein said peptide is a lipopeptide.

9. The method of claim 8 wherein the lipid is palmitoyl or cholesterol.

10. The method of claim 7 wherein said lipopeptide is CLP-175 or CLP-176.

11. The method of claim 6 wherein said mixture is administered with an adjuvant.

12. A peptide having an amino acid corresponding to amino acids 52 to 116 (SEQ ID No:9) of the sequence of the Rev protein of HIV-1 LAI isolate and containing T-cell epitopes within amino acids 63 to 73 (SEQ ID NO:3), 74 to 83 (SEQ ID NO:5) and 102 to 110 (SEQ ID NO:8), or having a corresponding amino acid sequence from another HIV-I isolate.

13. The peptide of claim 12 in the form of a lipopeptide.

14. The peptide of claim 13 wherein the lipid is palmitoyl or cholesterol.

15. The peptide of claim 13 wherein the lipopeptide is CLP-175 or CLP-176.

L1 ANSWER 7 OF 16 USPATFULL on STN
2000:10008 Synthetic Haemophilus influenzae conjugate vaccine.
Chong, Pele, Richmond Hill, Canada
Kandil, Ali, Willowdale, Canada
Sia, Charles, Thornhill, Canada
Klein, Michel, Willowdale, Canada
Connaught Laboratories Limited, Willowdale, Canada (non-U.S. corporation)
US 6018019 20000125
WO 9315205 19930805
APPLICATION: US 1994-256839 19941003 (8)
WO 1993-CA41 19930203 19941003 PCT 371 date 19941003 PCT 102(e) date
PRIORITY: GB 1992-2219 19920203
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A synthetic peptide having an amino acid sequence which includes at least one antigenic determinant of at least one outer membrane protein (OMP) of Haemophilus influenzae, wherein said OMP is selected from the group consisting of (a) the P1 protein of Haemophilus influenzae type b and said amino acid sequence is at least one selected from the amino acid sequences 39 to 64 (SEQ ID NO: 12) and 179 to 218 (SEQ ID NO: 15) as set forth in Table 1, (b) the P2 protein of Haemophilus influenzae type b and said amino acid sequence is at least one selected from any of the amino acid sequences 1 to 14 (SEQ ID NO: 16), 53 to 81 (SEQ ID NO: 20), 125 to 150 (SEQ ID NO: 23), 148 to 174 (SEQ ID NO: 24), 193 to 219 (SEQ ID NO: 26), 219 to 244 (SEQ ID NO: 27), 241 to 265 (SEQ ID NO: 28), 263 to 289 (SEQ ID NO: 29), 285 to 306 SEQ ID NO: 30), 302 to 319 (SEQ ID NO:31), and 314 to 341 (SEQ ID NO: 32) as set forth in Table 2, and (c) the P6 protein of Haemophilus influenzae type b and said amino acid sequence is at least one selected from any of the amino acid sequences set forth in Table 3.

2. The synthetic peptide of claim 1 wherein said OMP is the P2 protein of Haemophilus influenzae type b and said amino acid sequence is at least one selected from any of the amino acid sequences 53 to 81 (SEQ ID NO: 20), 148 to 174 (SEQ ID NO: 24), 241 to 265 (SEQ ID NO: 28) and 314 to 341 (SEQ ID NO: 32) set forth in Table 2.

3. The synthetic peptide of claim 1 wherein said OMP is the P6 protein of Haemophilus influenzae type b and said amino acid sequence is at least one selected from any of the amino acid sequences 73 to 96 (SEQ ID NO: 39), 90 to 114 (SEQ ID NO: 40) and 109 to 134 (SEQ ID NO: 41) set forth in Table 3.

4. The synthetic peptide of claim 1 wherein said OMP is the P2 protein of Haemophilus influenzae type b and said amino acid sequence is selected from any one of the amino acid sequences 125 to 150 (SEQ ID NO: 23), 193 to 219 (SEQ ID NO: 26), 219 to 244 (SEQ ID NO: 27) and 241 to 265 (SEQ ID NO: 28) as set forth in Table 2.

5. The synthetic peptide of claim 1 wherein said OMP is the P6 protein of Haemophilus influenzae type b and said amino acid sequence is at least one selected from any of the amino acid sequences 19 to 41 (SEQ ID NO: 36), 35 to 58 (SEQ ID NO: 37), 73 to 96 (SEQ ID NO: 39) and 109 to 134 (SEQ ID NO: 41) as set forth in Table 3.

L1 ANSWER 8 OF 16 USPATFULL on STN
1999:132241 Synthesis of polyribosylribitol phosphate oligosaccharides.
Chong, Pele, Richmond Hill, Canada
Kandil, Ali, Willowdale, Canada

Sia, Charles, Thornhill, Canada
Klein, Michel, Willowdale, Canada
Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5972349 19991026
APPLICATION: US 1995-475985 19950607 (8)
PRIORITY: GB 1992-2219 19920302
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. A process for the production of a polyribosylribitol phosphate (PRP) oligomer, which comprises: coupling a compound of the formula: ##STR12## wherein R_1 is a first protecting group and R_2 is a second protecting group, to a solid polyethylene glycol monoethyl ether (PEG) support to form a PEG-supported compound, dissolving said PEG-supported compound in a solvent, removing said first protecting group from said PEG-supported compound to form a deprotected PEG-supported compound, coupling the deprotected PEG-supported compound with a repeating unit for chain elongation of the formula: ##STR13## removing the protecting group from the phosphorus atom to form a PEG-supported synthetic PRP, removing said PEG-supported synthetic PRP in solid form from said solvent to separate the PEG-supported synthetic PRP from by-products, redissolving said PEG-supported synthetic PRP in solid form in a solvent, repeating said step of removing said first protecting group, coupling with the repeating unit, removing the protecting group from the phosphorus atom, removing PEG-supported synthetic PRP in solid form from the solvent and redissolving PEG-supported synthetic PRP in solid form in a solvent until a desired number of repeating units in the PRP oligomer has been assembled, terminating the oligomer with a chain-terminating molecule of the formula: ##STR14## wherein m is an integer from 4 to 6 and R_3 is a third protecting group to produce a PEG-bound protected PRP oligomer, removing the protecting group from the phosphorus atom, and removing said PEG-bound protected PRP oligomer in solid form from said solvent to separate the PEG-bound protected PRP oligomer of the formula: ##STR15## wherein n is an integer from 3 to 20 and X+ is a counter ion.

2. The process of claim 1 wherein said purified PEG-bound protected oligomer is cleaved from said PEG support to provide a compound of the formula: ##STR16## and removing said second and third protecting groups to provide an unbound unprotected PRP oligomer.

3. The process of claim 2 wherein R_2 is benzyl, R_1 is dimethoxytrityl and R_3 is monomethoxytrityl.

4. The process of claim 2 wherein said counter ion is ammonium.

5. The process of claim 2 including converting the unbound unprotected PRP oligomer to a synthetic PRP oligomer represented by the formula: ##STR17## wherein R is a linker fragment.

6. The process of claim 5 wherein said linker fragment has the formula $--CH_2\ (CH_2)_m\ --X$ in which m is an integer and X is a chemically-reactive functional group, an amino reactive group or a photoactivatable group.

7. The process of claim 6 wherein the counter ion is a sodium ion.

8. The process of any one of claims 1 to 7 wherein said polyethylene glycol has a loading capacity of about 200 to 500 μmol/g of support.

L1 ANSWER 9 OF 16 USPATFULL on STN
1999:109976 Tandem synthetic HIV-1 peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5951986 19990914
APPLICATION: US 1995-467881 19950606 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. An immunogenic composition, comprising at least one synthetic peptide which is selected from the group consisting of: (i) a synthetic peptide, which consists of at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate and is selected from the group consisting of P24N, P24L, P24M and P24H and having the respective amino acid sequences QMREPRGSDIAGTTSTL (SEQ ID NO: 70), EEMMTACQGVGGPGHK (SEQ ID NO: 73),

GHKARVLAEAMSQVT (SEQ ID NO: 76) and PIVQNIQGQMVHQAI(SEQ ID NO: 79) linked at the C-terminal end thereof, to at least one amino acid sequence which is a B-cell epitope of the V3 loop of the envelope protein of an HIV isolate, (ii) a synthetic peptide, which consists of at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence which contains a B-cell epitope and consisting of a hybrid V3 loop sequence from at least two different HIV-1 isolates; (iii) a synthetic peptide, which consists of at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence which contains a B-cell epitope comprising a consensus sequence of the V3 loop of at least two HIV-1 primary isolates; (iv) a synthetic peptide, which consists of at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least two amino acid sequences which contain a B-cell epitope, said B-cell epitope containing amino acid sequences each consisting of a V3 loop sequence from a different HIV-1 isolate or HIV-isolate consensus sequences; (v) a synthetic peptide, which consists of at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence which contain a B-cell epitope of the gp41 protein of an HIV isolate and containing the amino acid sequence X_1 LKDWX_2 wherein X_1 is E, A, G or Q and X_2 is A or T or an amino acid sequence capable of eliciting an HIV-specific antiserum and recognizing the amino acid sequence X_1 LKDWX_2, and (vi) a synthetic peptide, having a plurality of individual synthetic peptides linked at the C-terminus of each said individual linear synthetic peptide to form a multimeric molecule, each said individual synthetic peptide having an amino acid sequence which contains a T-cell epitope of a gag or envelope protein of a human immunodeficiency virus (HIV) isolate linked to an amino acid sequence which contains a B-cell epitope of a gag or envelope protein of an HIV isolate, and a pharmaceutically-acceptable carrier therefor.

2. The immunogenic composition of claim 1 comprising a plurality of said synthetic peptides selected to provide an immune response to a plurality of immunologically-distinct HIV-1 isolates.

3. The immunogenic composition of claim 2 wherein said plurality of said synthetic peptides are further selected to provide said immune response in a plurality of hosts differentially responsive to T-cell epitopes.

4. The immunogenic composition of claim 3 wherein said plurality of synthetic peptides comprises: GPKEPFRDYVDRFYKNKRKRIHIGPGRAFYTTKN (CTLB-36) (SEQ ID NO: 3); KQIINMWQEVEKAMYANKRKRIHIGPGRAFTTTKN (CTLB-91) (SEQ ID NO: 23); GPKEPFRDYVDRFYKNTRKSIHIGPGRAFYATGEIIG (BX08) (SEQ ID NO: 43).

5. The immunogenic composition of claim 4 wherein said plurality of synthetic peptides further comprises: GPKEPFRDYVDRFYKPGELDKWASGPGKQIINMW QEVEKAMYA (MPK-2) (SEQ ID NO: 95).

6. The immunogenic composition of claim 1 formulated for mucosal or parenteral administration.

7. The immunogenic composition of claim 6 further comprising at least one other immunogenic or immunostimulating material.

8. The composition of claim 7 wherein the at least one other material is an adjuvant.

9. The composition of claim 8, wherein the adjuvant is aluminum phosphate or aluminum hydroxide.

L1 ANSWER 10 OF 16 USPATFULL on STN
1999:27198 Tandem synthetic HIV-1 Peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, Willowdale, Canada (non-U.S. corporation)
US 5876731 19990302
APPLICATION: US 1995-462507 19950605 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. A synthetic peptide, which comprises at least one amino acid sequence containing a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof, to at least one amino acid sequence containing a B-cell epitope of the gp41 protein of an HIV isolate and containing the amino acid sequence X_1 LKDWX_2 wherein X_1 is E, A, G or Q and X_2 is A or T or an amino acid sequence capable of eliciting an HIV-specific antiserum and recognizing the sequence X_1 LKDWX_2.

2. The synthetic peptide of claim 1 wherein said HIV isolate is an HIV-1 isolate.

3. The synthetic peptide of claim 2 wherein said gp41 protein is that of an HIV-1 isolate selected from the group consisting of LAV, BRU, MN, SF2, RF, PRI, 1714, 2054, HXB2, Z6, BX08, IIIB and SC.

4. The synthetic peptide of claim 3 wherein said T-cell epitope-containing amino acid sequence comprises one selected from the group consisting of P24E, P24N, P24L, P24M and P24H having the respective amino acid sequences GPKEPFRDYVDRFYK (SEQ ID NO: 2) OMREPRGSDIAGTTSTL (SEQ ID NO: 70), EEMMTACOGVGGPGHK (SEQ ID NO: 73), GHKARVLAEAMSOVT (SEQ ID NO: 77) and PIVONIOGOMVHOAI (SEQ ID NO: 79) or a portion, variation or mutant of any of the selected amino acid sequences which retains the T-cell properties of said selected amino acid sequence.

5. The synthetic peptide of claim 1 wherein said T-cell epitope containing amino acid sequence comprises p24E or a portion, variation or mutant thereof which retains the T-cell properties of the sequence and said B-cell epitope containing amino acid sequence comprises the sequence ELKDWA or comprises a sequence capable of eliciting an HIV specific antiserum and recognizing the sequence ELKDWA.

6. The synthetic peptide of claim 5 wherein said B-cell epitope containing amino acid sequence is directly coupled to the C-terminal of said T-cell containing amino acid sequence.

7. The synthetic peptide of claim 5 wherein said B-cell epitope containing amino acid sequence is selected from the sequences EQELLELDKWASLWNWFDIT (CLTB-92A), ELLELDKWASLWNWFDIT (CLTB-94), ELDKWASLWNWFDIT (CLTB-96), EQELLELDKWASLWNWF (CLTB-97A), ELLELDKWASLWNWF, ELDKWASLWNWF, EQELLELDKWA, ELLELDKWA, ELDKWAS and GPGELLELDKWASL or a portion, variation or mutant thereof which retains the B-cell properties of the sequence.

8. The synthetic peptide of claim 1 wherein said B-cell epitope containing sequence is additionally linked to an amino acid sequence comprising at least one B-cell epitope of the V3 loop of the envelope protein of an HIV isolate.

9. The synthetic peptide of claim 8 wherein said peptide is an amino acid sequence selected from the group consisting of CTLB-102 (SEQ ID NO: 85), CTLB-103 (SEQ ID NO: 86), CTLB-105 (SEQ ID NO: 87), CTLB-107 (SEQ ID NO: 88), T1-KAT4 (SEQ ID NO: 89) and P24E-KAT4 (SEQ ID NO: 90).

10. The synthetic peptide of claim 4 wherein said B-cell epitope containing sequence is additionally linked to a further amino acid sequence containing a T-cell epitope of the gag protein or the envelope protein of HIV.

11. The synthetic peptide of claim 10 wherein said further T-cell epitope containing sequence is additionally linked to at least one further amino acid sequence containing a B-cell epitope of the gp41 or V3 loop envelope protein of an HIV isolate.

12. The synthetic peptide of claim 10 which comprises one of the amino acid sequences MPK-1 (SEQ ID NO: 94), MPK-2 (SEQ ID NO: 95), MPK-3 (SEQ ID NO: 96) and MPK-4.

13. An immunogenic composition, comprising at least one synthetic peptide as claimed in claim 1, and a pharmaceutically-acceptable carrier therefor.

L1 ANSWER 11 OF 16 USPATFULL on STN
1998:122503 Tandem synthetic HIV-1 peptide.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada

Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5817754 19981006
APPLICATION: US 1995-464329 19950605 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. A synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least two amino acid sequences which contain a B-cell epitope, said amino acid sequences each comprising a V3 loop sequence from a different HIV-1 isolate or HIV-isolate consensus sequences.

2. A synthetic peptide having at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least two amino acid sequences which contain a B-cell epitope, said amino acid sequences each containing a V3 loop consensus sequence from a different HIV-1 isolate or HIV-isolate consensus sequence, wherein an amino acid sequence containing a B-cell epitope from another V3 loop sequence of an HIV-1 isolate or another HIV-1 isolate consensus sequence is linked to said at least two amino acid sequences.

3. The synthetic peptide of claim 2 which is CTLB-160 (SEQ ID NO:91) or CTLB-161 (SEQ ID NO:92).

4. An immunogenic composition, comprising a plurality of synthetic peptides, each said synthetic peptide comprising a T-cell epitope of a protein of a human immunodeficiency virus (HIV) linked at the C-terminal end thereof to at least one amino acid sequence comprising a B-cell epitope of a protein of an HIV, wherein said plurality of synthetic peptides is selected to provide an immune response to a plurality of immunologically-distinct HIV-1 isolates and is further selected to provide said immune response in a plurality of hosts differentially responsive to T-cell epitopes.

5. The immunogenic composition of claim 4 wherein said plurality of synthetic peptides comprises a mixture of CTLB-36 (SEQ ID NO:3) and/or CTLB-84 (SEQ ID NO:77), CTLB-91 (SEQ ID NO:23) and CTLB-70 (SEQ ID NO:74).

6. The immunogenic composition of claim 5 wherein said plurality of synthetic peptides further comprises peptide MPK-2 (SEQ ID NO:95).

L1 ANSWER 12 OF 16 USPATFULL on STN
1998:104398 Tandem synthetic HIV-1 peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, Willowdale, Canada (non-U.S. corporation)
US 5800822 19980901
APPLICATION: US 1995-465217 19950605 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. A synthetic peptide molecule having a plurality of individual linear synthetic peptides linked at the C-terminus of each said individual linear synthetic peptides to form a multimeric molecule, each said individual linear synthetic peptides having an amino acid sequence containing a T-cell epitope of a gag or envelope protein of a human immunodeficiency virus (HIV) isolate linked to an amino acid sequence containing a B-cell epitope of a gag or envelope protein of an HIV isolate.

2. The synthetic peptide molecule of claim 1 wherein each synthetic peptide in said multimeric molecule is the same.

3. The synthetic peptide molecule of claim 1 wherein said individual linear synthetic peptides are selected from the group consisting of: (a) a synthetic peptide having at least one amino acid sequence containing a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the N-terminal or C-terminal end thereof, to at least one amino acid sequence containing a B-cell epitope of the V3 loop of the envelope protein of an HIV isolate, wherein, when located at said N-terminal end, said B-cell epitope containing sequence and said T-cell epitope containing sequence are directly coupled; and (b) a synthetic peptide having at least one amino acid sequence containing a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV)

isolate linked at the N-terminal or C-terminal end thereof, to at least one amino acid sequence containing a B-cell epitope of the gp41 protein of an HIV isolate comprising the sequence X_1 LKDWX_2 wherein X_1 is E, A, G or Q and X_2 is A or T or a sequence capable of eliciting an HIV-specific antiserum and recognizing the sequence X_1 LKDWX_2.

4. The synthetic peptide molecule of claim 1 wherein said multimeric molecule is: [GPKEPFRDYVDRFYKNKRKRIHIGPGRAFYTTKN]$_4$.

5. The synthetic peptide molecule of claim 1 wherein said multimeric molecule is: [GPKEPFRDYVDRFYKRKRIHIGPGRAFYTTKN]$_4$.

6. The synthetic peptide molecule of claim 1 wherein said multimeric molecule is: [GPKEPFRDYVDRFYKNTRKSIRIQRGPGRAFYTTKN]$_4$.

7. The synthetic peptide molecule of claim 1 wherein said multimeric molecule is: [KQIINWQEVEKAMYANKRKRIHIGPGRAFYTTKN]$_4$.

8. The synthetic peptide molecule of claim 1 wherein said multimeric molecule is: [GPKEPFRDYVDRFYKRIHIGPGRAFYTTKN]$_4$.

9. An immunogenic composition, comprising at least one synthetic peptide as claimed in claim 1, and a pharmaceutically-acceptable carrier therefor.

L1 ANSWER 13 OF 16 USPATFULL on STN
1998:98975 Tandem synthetic HIV-1 peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5795955 19980818
APPLICATION: US 1995-463966 19950605 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A synthetic peptide, which consists of at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence which contains a B-cell epitope and consisting of a hybrid V3 loop sequence from at least two different HIV-1 isolates.

2. The synthetic peptide of claim 1 wherein said B-cell epitope containing amino acid sequence comprises the sequence NTRKSIRIQRGPGRAFYTTKIN (VP) or NKRKRIHIGPGRVIYATGQIIG (HB).

3. A synthetic peptide of claim 1 wherein said amino acid sequence of said B-cell epitope is selected from the group consisting of NTRKSIPIGPGRAFYTTG (PRI), NTRKSIHIGPGRAFYTTGEIIGC (FRE), KSIHIGPGKTLYAT (LIP) and RKSIPIGPGRAFYTSG (NYA).

4. A synthetic peptide, which consists of at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence which contains a B-cell epitope and consists of a consensus sequence of the V3 loop of at least two HIV-1 primary isolates.

5. A synthetic peptide, which consists of at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least two amino acid sequences which contain a B-cell epitope, said amino acid sequences each consisting of a V3 loop sequence from a different HIV-1 isolate or HIV-isolate consensus sequences.

6. A synthetic peptide which is CTLB-160 having the anino aid sequence GPKEPFRDYVDRFYKKSIHIGPGKTLYATGPGSITIGPGOVFYRGPGRKSIPI GPGRAFYTTG (SEQ ID No.:91) or CTLB-161 having the amino acid sequence KQIINMWQEVEKAMYAKSIHIGPGKTLYATGPGSITIGPGOVFYRGPKSIPI GPGRAFYTTG (SEQ ID No.:92).

L1 ANSWER 14 OF 16 USPATFULL on STN
1998:61389 Tandem synthetic HIV-1 peptides.
Sia, Charles D. Y., Thornhill, Canada

Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5759769 19980602
APPLICATION: US 1995-460602 19950602 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. A diagnostic kit useful for detecting HIV specific antibodies in a test sample, the kit comprising: (a) a surface; (b) at least one peptide immobilized on the surface and having an amino acid sequence epitopically specific for the HIV-specific antibodies, wherein said peptide is selected from the group consisting of: (i) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate and is selected from the group consisting of P24N, P24L, P24M and P24H having the respective amino acid sequences OMREPRGSDIAGTTSTL (SEQ ID NO:70), EEMMTACOGVGGPGHK (SEQ ID NO:73), GHKARVLAEAMSQVT (SEQ ID NO:76) and PIVQNIQGQMVHQAI (SEQ ID NO:79) linked at the C-terminal end of said T-cell epitope, to at least one amino acid sequence which is a B-cell epitope of the V3 loop of the envelope protein of an HIV isolate, (ii) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence which contains a B-cell epitope comprising a hybrid V3 loop sequence from at least two HIV-1 isolates; (iii) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence which contains a B-cell epitope comprising a consensus sequence of the V3 loop of at least two HIV-1 primary isolates; (iv) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolates linked at the C-terminal end thereof to at least two amino acid sequences each containing a B-cell epitope, said B-cell epitope containing amino acid sequences each comprising a V3 loop sequence from a different HIV-1 isolate or HIV-isolate consensus sequences; (v) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof, to at least one amino acid sequence which contains a B-cell epitope of the gp41 protein of an HIV isolate comprising the amino acid sequence X_1 LKDWX_2 wherein X_1 is E, A, G or Q and X_2 is A or T or an amino acid sequence capable of eliciting an HIV-specific antiserum and recognizing the amino acid sequence X_1 LKDWX_2 ; and (vi) a synthetic peptide, which comprises a plurality of individual synthetic peptides linked to form a multimeric molecule, each said individual synthetic peptide comprising an amino acid sequence which contains a T-cell epitope of a gag or envelope protein of a human immunodeficiency virus (HIV) isolate linked to an amino acid sequence which contains a B-cell epitope of a gag or envelope protein of an HIV isolate; and (c) reagent for detecting a complex formed between HIV specific antibodies in the test sample and the at least one immobilized peptide.

2. A diagnostic kit for detecting HIV antigens in a test sample, the kit comprising: (a) a surface; (b) an antibody immobilized on the surface and epitopically specific and noncross-reactive for distinct epitopes of the HIV antigen and raised to a peptide which is selected from the group consisting of: (i) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate selected from the group consisting of P24N, P24L, P24M and P24H having the respective amino acid sequences OMREPRGSDIAGTTSTL (SEQ ID NO:70), EEMMTACOGVGGPGHK (SEQ ID NO:73), GHKARVLAEAMSQVT (SEQ ID NO:76) and PIVONIOGOMVHOAI (SEQ ID NO:79) linked at the C-terminal end of said T-cell epitope, to at least one amino acid sequence which contains a B-cell epitope of the V3 loop of the envelope protein of an HIV isolate, (ii) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence which contains a B-cell epitope comprising a hybrid V3 loop sequence from at least two HIV-1 isolates; (iii) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence comprising a B-cell epitope which contains a consensus sequence of the V3 loop of at least two HIV-1 primary isolates; (iv) a synthetic

peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolates linked at the C-terminal end thereof to at least two amino acid sequences each containing a B-cell epitope, said B-cell epitope containing amino acid sequence each comprising a V3 loop sequence from a different HIV-1 isolate or HIV-isolate consensus sequence; (v) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof, to at least one amino acid sequence which contains a B-cell epitope of the gp41 protein of an HIV isolate comprising the amino acid sequence X_1 LKDWX_2 wherein X_1 is E, A, G or Q and X_2 is A or T or an amino acid sequence capable of eliciting an HIV-specific antiserum and recognizing the amino acid sequence X_1 LKDWX_2 ; and (vi) a synthetic peptide, which comprises a plurality of individual synthetic peptides linked to form a multimeric molecule, each said individual synthetic peptide comprising an amino acid sequence which contains a T-cell epitope of a gag or envelope protein of a human immunodeficiency virus (HIV) isolate linked to an amino acid sequence which contains a B-cell epitope of a gag or envelope protein of an HIV isolate; and (c) reagent for detecting a complex formed between HIV antigens in the test sample and the at least one immobilized antibody.

3. An antibody specific for a peptide which is selected from the group consisting of: (i) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate selected from the group consisting of P24N, P24L, P24M and P24H having the respective amino acid sequences OMREPRGSDIAGTTSTL (SEQ ID NO:70) EEMMTACOGVGGPGHK (SEQ ID NO:73) GHKARVLAEAMSQVT (SEQ ID NO:76) and PIVONIOGOMVHOAI (SEQ ID NO:79) linked at the C-terminal end of said T-cell epitope, to at least one amino acid sequence which contains a B-cell epitope of the V3 loop of the envelope protein of an HIV isolate, (ii) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence which contains a B-cell epitope comprising a hybrid V3 loop sequence from at least two HIV-1 isolates; (iii) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof to at least one amino acid sequence which contains a B-cell epitope comprising a consensus sequence of the V3 loop of at least two HIV-1 primary isolates; (iv) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolates linked at the C-terminal end thereof to at least two amino acid sequences each containing a B-cell epitope, said B-cell epitope containing amino acid sequences each comprising a V3 loop sequence from a different HIV-1 isolate or HIV-isolate consensus sequence; (v) a synthetic peptide, which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at the C-terminal end thereof, to at least one amino acid sequence which contains a B-cell epitope of the gp41 protein of an HIV isolate comprising the amino acid sequence X_1 LKDWX_2 wherein X_1 is E, A, G or Q and X_2 is A or T or an amino acid sequence capable of eliciting an HIV-specific antiserum and recognizing the amino acid sequence X_1 LKDWX_2 ; and (vi) a synthetic peptide, which comprises a plurality of individual synthetic peptides linked to form a multimeric molecule, each said individual synthetic peptide comprising an amino acid sequence which contains a T-cell epitope of a gag or envelope protein of a human immunodeficiency virus (HIV) isolate linked to an amino acid sequence which contains a B-cell epitope of a gag or envelope protein of an HIV isolate.

L1 ANSWER 15 OF 16 USPATFULL on STN
97:96561 Synthetic Haemophilus influenzae conjugate vaccine.
Chong, Pele, Richmond Hill, Canada
Kandil, Ali, Willowdale, Canada
Sia, Charles, Thornhill, Canada
Klein, Michel, Willowdale, Canada
Connaught Laboratories Limited, Willowdale, Canada (non-U.S. corporation)
US 5679352 19971021
APPLICATION: US 1995-475989 19950607 (8)
PRIORITY: GB 1992-2219 19920302
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. An immunogenic conjugate, comprising a synthetic peptide having an amino acid sequence which includes at least one immunodominant T-cell epitope of at least one other membrane protein (OMP) of Haemophilus influenzae linked to at least one synthetic B-cell epitope.

2. The conjugate of claim 1 wherein said OMP is the P1 protein of Haemophilus influenzae type b and said amino acid sequence is at least one selected from the group consisting of the amino acid sequences 39 to 64 (SEQ ID NO: 12), 165 to 193 (SEQ ID NO: 4), 189 to 218 (SEQ ID NO: 5), 226 to 253 (SEQ ID NO: 6), 339 to 370 (SEQ ID NO: 10) and 400 to 437 (SEQ ID NO: 13) as set forth in Table 1 and portions of variants thereof which retain immunogenicity.

3. The conjugate of claim 1 wherein said OMP is the P2 protein of Haemophilus influenzae type b and said amino acid sequence is at least one selected from the group consisting of the amino acid sequences 125 to 150 (SEQ ID NO: 23), 193 to 219 (SEQ ID NO: 26), 219 to 244 (SEQ ID NO: 27) and 241 to 265 (SEQ ID NO: 28) as set forth in Table 2 and portion or variants thereof which retain immunogenicity.

4. The conjugate of claim 1 wherein said OMP is the P6 protein of Haemophilus influenzae type b and said amino acid sequence is at least one selected from the group consisting of the amino acid sequences 19 to 41 (SEQ ID NO: 36), 35 to 58 (SEQ ID NO: 37), 73 to 96 (SEQ ID NO: 39) and 109 to 134 (SEQ ID NO: 41) as set forth in Table 3 and portions or variants thereof which retain immunogenicity.

5. The conjugate of claim 1 comprising at least one T-cell epitope of P1, P2 or P6 protein of Haemophilus influenzae type b and at least one neutralization B-cell epitope of P1, P2 or P6 protein of Haemophilus influenzae type b.

6. The conjugate of claim 1 wherein said peptide is selected from the group consisting of P1 - P2 chimeric synthetic peptides having amino acid sequences as set forth in Table 11.

7. A vaccine against disease caused by Haemophilus influenzae, comprising the immunogenic conjugate as claimed in claim 1, and a physiological carrier therefor.

8. A method of immunizing a host against a disease caused by Haemophilus influenzae, which comprises administering to the host an effective amount of a vaccine as claimed in claim 7.

9. A diagnostic reagent for detecting infection by Haemophilus influenzae comprising the immunogenic conjugate of claim 1.

10. A method of detecting infection by Haemophilus influenzae in a host, comprising the steps of: a) adding the immunoconjugate of claim 1 to a biological sample, b) allowing the immunoconjugate to bind to Haemophilus influenzae antibodies, and c) determining the level of binding.

11. An antibody raised against the immunogenic conjugate of claim 1.

L1 ANSWER 16 OF 16 USPATFULL on STN
97:52100 Tandem synthetic HIV-1 peptides.
Sia, Charles D. Y., Thornhill, Canada
Chong, Pele, Richmond Hill, Canada
Klein, Michel H., Willowdale, Canada
Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5639854 19970617
APPLICATION: US 1994-257528 19940609 (8)
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A synthetic peptide, which comprises at least one amino acid sequence comprising a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate selected from the group consisting of P24N, P24L, P24M and P24H having the respective amino acid sequences QMREPRGSDIAGTTSTL (SEQ ID NO: 70), EEMMTACQGVGGPGHK (SEQ ID NO: 73), GHKARVLAEAMSQVT (SEQ ID NO: 76) and PIVQNIQGQMVHQAI (SEQ ID NO: 79) or a portion, variation or mutant of any of the selected sequences which retains the T-cell properties of said selected sequence, linked at the C-terminal end of said T-cell epitope to at least one amino acid sequence comprising a B-cell epitope of the V3 loop of the envelope protein of an HIV isolate.

2. The synthetic peptide of claim 1 wherein said HIV isolate is an HIV-1 isolate.

3. The synthetic peptide of claim 2 wherein said V3 loop is that of an HIV-1 isolate selected from the group consisting of LAV, BRU, MN, SF2, RF, PRI, 1714, 2054, HXB2, Z6, BX08, IIIB and SC.

4. The synthetic peptide of claim 4 wherein said B-cell epitope containing amino acid sequence comprises the sequence GX_1 GX_2 where X_1 is P or L and X_2 is R, K or Q or comprises a sequence capable of eliciting an HIV specific antiserum and recognizing the sequence GX_1 GX_2.

5. The synthetic peptide of claim 4 wherein said B-cell epitope containing amino acid sequence comprises the sequence GPGR or comprises a sequence capable of eliciting HIV-specific antiserum and recognizing the sequence GPGR.

6. The synthetic peptide of claim 5 wherein said B-cell epitope containing amino acid sequence is directly coupled to the C-terminus of said T-cell containing amino acid sequence.

7. The synthetic peptide of claim 5 wherein said B-cell epitope containing amino acid sequence comprises the sequence NKRKRIHIGPGRAFYTTKN (CTLB-56) or a portion, variation or mutant thereof which retains the B-cell properties of the sequence.

8. The synthetic peptide of claim 5 wherein said B-cell containing amino acid sequence is selected from the group consisting of sequences NKRKRIHIGPGRAFYTTKN (CTLB-56) RIHIGPGRAFYTTKN (V3PIN), RKRIHIGPGRAF (CTLB-29), RKRIHIGPGRAFYTTKN (CTLB-55), NTRKSIYIGPGRAFHTTGR (SF2), NTRKRIRIQRGPGRAFVTIGK (LAI), NTRKSIRIQRGPGRAFYTIG (IIIB), NTRKSITKGPGRVIYATGQ (RF), NTRKSITKGPGRVIYATGQIIG (RF), NTRQSTPIGLGQALYTTRG (Z6), NTRKGIHIGPGRAFYTGEIVGDIRQ (2054), NTRKRIHMGPGRAFYATGDIIG (1714) and NTRKSIHIGPGRAFYATGEIIG (BX08).

9. The synthetic peptide of claim 1 wherein the B-cell epitope containing sequence is additionally linked to a further amino acid sequence containing a T-cell epitope of the gag protein or the envelope protein of HIV.

10. An immunogenic composition, comprising an immunoeffective amount of at least one synthetic peptide as claimed in claim 1, and a pharmaceutically-acceptable carrier therefor.

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     (FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

     FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
                E SIA CHARLES/IN
L1            16 S E3-E5

=> e klein michel/in
E1             6     KLEIN MICHAEL T/IN
E2             2     KLEIN MICHAEL V/IN
E3            31 --> KLEIN MICHEL/IN
E4           130     KLEIN MICHEL H/IN
E5            16     KLEIN MICHEL HENRI/IN
E6             2     KLEIN MICHELLE/IN
E7             4     KLEIN MICKAEL/IN
E8             1     KLEIN MIDDELINK MARC/IN
E9             1     KLEIN MIDDELINK MARC WILLEM THEODORUS/IN
E10            1     KLEIN MILES/IN
E11            1     KLEIN MILTON/IN
E12            6     KLEIN MILTON L/IN

=> s e3-e-5
          24643 E3
        2655817 E
        4083419 5
L2            1 E3-E-5
                  (E3(W)E(W)5)

=> del l2
DELETE L2? (Y)/N:y
```

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            31 "KLEIN MICHEL"/IN
           130 "KLEIN MICHEL H"/IN
            16 "KLEIN MICHEL HENRI"/IN
L2         177 ("KLEIN MICHEL"/IN OR "KLEIN MICHEL H"/IN OR "KLEIN MICHEL HENRI
               "/IN)

=> s l2 and (T-helper)
       1068740 T
         23655 HELPER
          5269 T-HELPER
                 (T(W)HELPER)
L3           47 L2 AND (T-HELPER)

=> s l3 and (T-helper/clm)
        128714 T/CLM
          1473 HELPER/CLM
           248 T-HELPER/CLM
                 ((T(W)HELPER)/CLM)
L4             2 L3 AND (T-HELPER/CLM)

=> d l4,cbib,clm,1-2

L4   ANSWER 1 OF 2  USPATFULL on STN
2003:314467 Multi oligosaccharide glycoconjugate bacterial meningitis vaccines.
    Chong, Pele, Richmond Hill, CANADA
    Lindberg, Alf, Lyons, FRANCE
    Klein, Michel H., Willowdale, CANADA
    Aventis Pasteur Limited, Toronto, CANADA (non-U.S. corporation)
    US 6656472 B1 20031202
    WO 9942130  19990826
    APPLICATION: US 2000-622782  20001222 (9)
    WO 1999-CA157 19990223
    DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM    What is claimed is:
       1. A method of forming a multivalent immunogenic molecule tag
       comprising: treating at least two different carbohydrate molecules to
       obtain carbohydrate fragments thereof, forming a lysine-branching
       peptide containing at least two different T-helper cell epitopes as
       a carrier molecule anchored to a polymeric anchor wherein at least two
       carrier peptide segments have different terminal protecting groups,
       selectively removing one-of the protecting groups, coupling a first one
       of the oligosaccharide fragments to the unprotected carrier peptide
       segment, selectively removing another of the protecting groups, coupling
       a second one of the oligosaccharide fragments to the unprotected carrier
       peptide segment, and cleaving the resulting molecule from the polymeric
       anchor.

       2. The method of claim 1 wherein said carbohydrate molecules are
       capsular polysaccharides of a bacteria and oligosaccharide fragments of
       said capsular polysaccharide are selected sized from about 2 to about 5
       kDa.

       3. The method of claim 2 wherein said capsular oligosaccharide fragments
       are capsular oligosaccharide fragments of Streptococcus pneumoniae.

       4. The method of claim 3 wherein said capsular oligosaccharide fragments
       are derived from at least two capsular polysaccharides of S. pneumoniae
       serotypes 1, 4, 5, 6B, 9V, 14, 18C, 19F and 23F.

       5. The method of claim 2 wherein said capsular polysaccharide fragments
       are capsular oligosaccharide fragments of Neisseria meningitidis.

       6. The method of claim 5 wherein said oligosaccharide fragments are
       derived from at least two capsular polysaccharides of N. meningitidis
       Group A, B, C, W-135 and Y.

       7. The method of claim 1 wherein said lysine-branching peptides are
       derived from protein fragments of S. pneumoniae.

       8. The method of claim 1 wherein said lysine-branching peptides contain
       at least three different T-helper cell epitopes.


L4   ANSWER 2 OF 2  USPATFULL on STN
2001:150268 HIV-SPECIFIC CYTOTOXIC T-CELL RESPONSES.
    SIA, CHARLES D. Y., THORNHILL, Canada
    CHONG, PELE, RICHMOND HILL, Canada
```

KLEIN, MICHEL H., WILLOWDALE, Canada
US 2001019714 A1 20010906
APPLICATION: US 1998-55744 A1 19980407 (9)
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

CLM What is claimed is:

1. A method of generating an HIV-specific cytotoxic T-cell (CTL) response in a host, which comprises: administering to the host a **T-helper** molecule to prime **T-helper** cells of the immune system of the host, and subsequently administering to the host a mixture of said **T-helper** molecule and a T-cell inducing HIV-derived molecule to generate an HIV-specific T-cell response in the host.

2. The method of claim 1 wherein said **T-helper** molecule is selected from HLA class II restricted **T-helper** epitopes.

3. The method of claim 2 wherein said **T-helper** epitopes are selected from the group consisting of DP, DR and DQ-specific T-cell epitopes.

4. The method of claim 2 wherein said **T-helper** molecule is CLP-243 (SEQ ID NO:10).

5. The method of claim 1 wherein said **T-helper** molecule is administered with an adjuvant.

6. The method of claim 1 wherein said T-cell inducing HIV-derived molecule includes a peptide corresponding to a portion of an HIV-1 antigen and containing at least one T-cell epitope.

7. The method of claim 5 wherein said peptide correspond to sequences of the Rev protein of HIV-1.

8. The method of claim 6 wherein said peptide is a lipopeptide.

9. The method of claim 8 wherein the lipid is palmitoyl or cholesterol.

10. The method of claim 7 wherein said lipopeptide is CLP-175 or CLP-176.

11. The method of claim 6 wherein said mixture is administered with an adjuvant.

12. A peptide having an amino acid corresponding to amino acids 52 to 116 (SEQ ID No:9) of the sequence of the Rev protein of HIV-1 LAI isolate and containing T-cell epitopes within amino acids 63 to 73 (SEQ ID NO:3), 74 to 83 (SEQ ID NO:5) and 102 to 110 (SEQ ID NO:8), or having a corresponding amino acid sequence from another HIV-I isolate.

13. The peptide of claim 12 in the form of a lipopeptide.

14. The peptide of claim 13 wherein the lipid is palmitoyl or cholesterol.

15. The peptide of claim 13 wherein the lipopeptide is CLP-175 or CLP-176.

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L1           16 S E3-E5
                E KLEIN MICHEL/IN
L2          177 S E3-E5
L3           47 S L2 AND (T-HELPER)
L4            2 S L3 AND (T-HELPER/CLM)

=> d his

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     FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
                E SIA CHARLES/IN
L1           16 S E3-E5
                E KLEIN MICHEL/IN
L2          177 S E3-E5
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L3           47 S L2 AND (T-HELPER)
L4            2 S L3 AND (T-HELPER/CLM)

=> d his

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     FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
                E SIA CHARLES/IN
L1           16 S E3-E5
                E KLEIN MICHEL/IN
L2          177 S E3-E5
L3           47 S L2 AND (T-HELPER)
L4            2 S L3 AND (T-HELPER/CLM)

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=> file wpids
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                               163.32     163.53

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    PLEASE CHECK:
http://thomsonderwent.com/support/dwpiref/reftools/classification/code-revision/
    FOR DETAILS. <<<

=> e sia charles/in
E1           14     SIA C D Y/IN
E2            1     SIA C H/IN
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=> s e1 or e3
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             7 "SIA C"/IN
            14 "SIA C D Y"/IN
L5          19 "SIA C"/IN OR "SIA C D Y"/IN

=> d l5,ti,1-19

L5   ANSWER 1 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Detecting severe acute respiratory syndrome SARS corona virus ScoV
     antibodies in patient sample, by contacting patient sample with SCoV
     antigenic peptides or immunologically functional analogs and measuring
     binding.

L5   ANSWER 2 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   New Severe Acute Respiratory Syndrome coronavirus (SARS coronavirus or
     SCoV) peptide, useful for detecting antibodies to SCoV in sera and body
     fluids and for diagnosing SARS.

L5   ANSWER 3 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Three-dimensional spiral stacked inductor manufacturing method for
     personal mobile communications equipment, involves forming connecting
     interlayer dielectric layer e.g. silicon oxide, over field dielectric
     layer and turns.

L5   ANSWER 4 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Parallel stacked inductor manufacturing method for personal mobile
     communication equipment, involves forming conductive layer on dielectric
     layer and two via openings of dielectric layer is processed to form turn.

L5   ANSWER 5 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Parallel stacked inductor manufacturing method for personal mobile
     communication device, involves processing conductive layer formed on
     dielectric layer, to form second-level turns connected to distal ends of
     first-level turns.

L5   ANSWER 6 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   New polypeptide, useful for treating cancers such as prostate cancer,
     comprises prostate-specific antigen derived peptide.

L5   ANSWER 7 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   New polypeptides useful for inducing an immune response and treating
     prostate cancer comprises polypeptides derived from the prostate specific
     membrane antigen.

L5   ANSWER 8 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Enhancing immune response to antigen such as tumor antigen for treating
     cancer in an animal involves administering an inducing agent to the animal
     followed by administering inducing agent-antigen mixture.

L5   ANSWER 9 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Vectors comprising sequences encoding the extracellular fragment of gp140
     of a primary human immunodeficiency virus (HIV)-1 isolate, useful for
     vaccinating against HIV-1.

L5   ANSWER 10 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Generating an HIV-specific cytotoxic T-cell response, useful to immunize
     against HIV.

L5   ANSWER 11 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Immunogenic composition containing synthetic fusion polypeptides
     containing both the T and B cell epitopes of the human immunodeficiency
     virus, useful antigens in producing vaccines.

L5   ANSWER 12 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Synthetic chimeric HIV polypeptides - comprising gag protein T-cell
     epitope linked to gp41 B-cell epitope.

L5   ANSWER 13 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Synthetic human immunodeficiency virus-1 peptide(s) - containing T-cell
     epitope and B-cell epitope(s) are candidate vaccines against HIV-1.

L5   ANSWER 14 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Synthetic peptide(s) based on HIV-1 envelope protein sequences - used as
     vaccines against, and for immunological detection of the virus.

L5   ANSWER 15 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Synthetic HIV-1-based peptide(s) - useful for vaccination against, and
     detection of HIV-1.

L5   ANSWER 16 OF 19  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
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TI Synthetic HIV peptide to provide specific antibodies - used in kits for detecting HIV antibodies or antigens.

L5 ANSWER 17 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Tandem synthetic HIV peptide(s) useful as immunogens - comprising gag protein T-cell epitope linked to env protein B-cell epitope.

L5 ANSWER 18 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Novel tandem synthetic HIV-1 peptide(s) - comprising T-cell epitope of gag protein linked to B-cell epitope of V3 loop protein of an HIV-I isolate.

L5 ANSWER 19 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Synthetic Haemophilus influenzae conjugate vaccine - comprising T-helper cell determinants and B-cell epitope(s) linked to synthetic oligo saccharide(s).

=> d 15,bib,ab,1-19

L5 ANSWER 1 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 2005-372341 [38] WPIDS
CR 2005-345384 [35]
DNC C2005-115392
TI Detecting severe acute respiratory syndrome SARS corona virus ScoV antibodies in patient sample, by contacting patient sample with SCoV antigenic peptides or immunologically functional analogs and measuring binding.
DC B04 D16
IN CHANG, T Y; FANG, X; LIU, S; LYNN, S; **SIA, C**; WANG, C Y
PA (UNBI-N) UNITED BIOMEDICAL INC
CYC 108
PI WO 2005047308 A2 20050526 (200538)* EN 67
RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
ADT WO 2005047308 A2 WO 2004-US37976 20041112
PRAI US 2004-983854 20041108; US 2003-712812 20031112
AB WO2005047308 A UPAB: 20050616
NOVELTY - Detecting (M1) severe acute respiratory syndrome (SARS) corona virus (ScoV) antibodies in a patient sample, comprises contacting the sample with one or more SCoV antigenic peptides chosen from SEQ ID Nos. 1, 5, 7, 9 and 12 (45, 22, 65, 50 or 52 amino acids) or immunologically functional analogs, and measuring binding between the patient sample and the peptides or analogs.

DETAILED DESCRIPTION - Detecting (M1) severe acute respiratory syndrome (SARS) corona virus (ScoV) antibodies in a patient sample, comprises;

(a) contacting the sample with one or more SCoV antigenic peptides chosen from SEQ ID Nos. 1, 5, 7, 9 and 12 (45, 22, 65, 50 or 52 amino acids) or immunologically functional analogs selected from SEQ ID Nos. 2-4, 6, 8, 10, 11 and 13-15 under conditions conducive to binding; and

(b) measuring binding between the patient sample and ScoV peptides or their analogs, where detection of binding indicates the presence of SCoV antibodies in the patient sample.

The method may also use analogs of SEQ ID Nos 1, 5, 7, 9 and 12 comprising one or more of the following modifications when compared to the SCoV antigenic peptides:

(a) a deletion of 10 amino acids or less at the N or C terminus;
(b) an addition of 15 amino acids or less at the N or C terminus;
(c) one or more conservative substitutions;
(d) an addition of a branched structure at the C terminus;
(e) covalent attachment to another moiety;
(f) an altered charge; or
(g) one or more conservative or non-conservative substitutions such that the sequence of the analog is the sequence of a strain of SCoV other than the Tor2 isolate of SCoV.

INDEPENDENT CLAIMS are also included for:

(1) a peptide selected from SEQ ID Nos 1-15;
(2) an immunologically functional analog of any of SEQ ID Nos 1, 5, 7, 9 and 12 comprising one or more modifications as described above;
(3) a nucleic acid encoding a peptide of (1) or (2) or a complement of such a nucleic acid;
(4) an (expression) vector comprising the nucleic acid.

USE - (M1) is useful for detecting SCoV antibodies in a patient sample chosen from blood, serum, plasma, saliva, urine, mucus, fecal matter and tissue extract (claimed). (I) and (II) are useful as antigenic compositions for immunological applications such as in immunoassays and/or diagnostic kits and for design of SARS vaccine.
Dwg.0/2

L5 ANSWER 2 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 2005-345384 [35] WPIDS
CR 2005-372341 [38]
DNC C2005-106804
TI New Severe Acute Respiratory Syndrome coronavirus (SARS coronavirus or SCoV) peptide, useful for detecting antibodies to SCoV in sera and body fluids and for diagnosing SARS.
DC B04 D16
IN CHANG, T Y; FANG, X; LIU, S; LYNN, S; **SIA, C**; WANG, C Y
PA (CHAN-I) CHANG T Y; (FANG-I) FANG X; (LIUS-I) LIU S; (LYNN-I) LYNN S; (SIAC-I) SIA C; (WANG-I) WANG C Y
CYC 1
PI US 2005100883 A1 20050512 (200535)* 25
ADT US 2005100883 A1 US 2003-712812 20031112
PRAI US 2003-712812 20031112
AB US2005100883 A UPAB: 20050616
NOVELTY - A peptide selected from 15 fully defined 22-81 amino acid sequences (SEQ ID NO: 1-15), given in the specification, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a method of detecting Severe Acute Respiratory Syndrome coronavirus (SARS coronavirus or SCoV) antibodies in a patient sample;
(2) an immunologically functional analog of an SCoV antigenic peptide selected from SEQ ID NO: 1, 5, 7, 9, or 12, where the immunologically functional analog comprises one or more of the following modifications when compared to the corresponding SCoV antigenic peptide:
(i) a deletion of 10 amino acids or less at the N-terminus or C-terminus;
(ii) an addition of 15 amino acids or less at the N-terminus or C-terminus,
(iii) one or more conservative substitution;
(iv) an addition of a branched structure at the C-terminus;
(v) covalent attachment to another group;
(vi) an altered charge; or
(vii) one or more conservative or non-conservative substitutions so that the sequence of the immunologically functional analogue is the sequence of a strain of SCoV other than the Tor2 isolate of SCoV;
(3) a nucleic acid molecule that encodes a peptide selected from SEQ ID NO: 1-15 or its complement; and
(4) a vector comprising the nucleic acid molecule of (3).
USE - The peptides are useful for detecting antibodies to SCoV (claimed) in sera and body fluids and for the diagnosis of SARS.
Dwg.0/4

L5 ANSWER 3 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 2005-282611 [29] WPIDS
CR 2004-280432 [26]
DNN N2005-231569
TI Three-dimensional spiral stacked inductor manufacturing method for personal mobile communications equipment, involves forming connecting interlayer dielectric layer e.g. silicon oxide, over field dielectric layer and turns.
DC U11 U12
IN CHEW, K W; CHU, S S; GOH, W L; NG, C Y; **SIA, C**; YEO, K S
PA (CHAR-N) CHARTERED SEMICONDUCTOR MFG LTD
CYC 1
PI US 2005057335 A1 20050317 (200529)* 8
ADT US 2005057335 A1 Div ex US 2002-131336 20020904, US 2004-962007 20041008
FDT US 2005057335 A1 Div ex US 6841847
PRAI US 2002-131336 20020904; US 2004-962007 20041008
AB US2005057335 A UPAB: 20050506
NOVELTY - The method involves forming a conductive material layer over a substrate. Another conductive material layer is formed over a field dielectric layer (114) e.g. field oxide, and in a turn (124) via an opening. One conductive material layer is processed to form two turns (126, 128). A connecting interlayer dielectric (ILD) layer (116) e.g. silicon oxide, is formed over the field dielectric layer and the turns (126, 128).
USE - Used for manufacturing a three-dimensional spiral stacked inductor on a semiconductor material e.g. silicon, in a personal mobile

communications equipment.
ADVANTAGE - The formation of the connecting interlayer dielectric (ILD) layer e.g. silicon oxide, over the field dielectric layer reduces current and lower current density in the turns, thus improving inductance and Q factor beyond 2.5 giga hertz. The method avoids additional processing steps or additional masks of the three-dimensional spiral stacked inductor. The method greatly reduces average parasitic capacitance of the inductor.
DESCRIPTION OF DRAWING(S) - The drawing shows a cross-sectional view of a three-dimensional spiral stacked inductor.
Field dielectric layer 114
Connecting interlayer dielectric layer 116
Spiral stacked inductor 122
Turns 124, 126, 128
Connecting contact 130``
Dwg.4/4

L5 ANSWER 4 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 2004-280432 [26] WPIDS
CR 2005-282611 [29]
DNN N2004-222121
TI Parallel stacked inductor manufacturing method for personal mobile communication equipment, involves forming conductive layer on dielectric layer and two via openings of dielectric layer is processed to form turn.
DC U11 U12
IN CHEW, K W; CHU, S S; GOH, W L; NG, C Y; **SIA, C**; YEO, K S; CHOON-BENG, S; LING, G W; SANFORD, C S; SENG, Y K; WAI, C K; YEOW, N C
PA (CHAR-N) CHARTERED SEMICONDUCTOR MFG LTD PTE; (CHEW-I) CHEW K W; (CHUS-I) CHU S S; (GOHW-I) GOH W L; (NGCY-I) NG C Y; (SIAC-I) SIA C; (YEOK-I) YEO K S
CYC 34
PI US 2004041234 A1 20040304 (200426)* 8
EP 1396875 A2 20040310 (200426) EN
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
JP 2004104129 A 20040402 (200426) 11
US 6841847 B2 20050111 (200505)
SG 109527 A1 20050330 (200524)
ADT US 2004041234 A1 US 2002-131336 20020904; EP 1396875 A2 EP 2003-19916 20030902; JP 2004104129 A JP 2003-312890 20030904; US 6841847 B2 US 2002-131336 20020904; SG 109527 A1 SG 2003-5645 20030902
PRAI US 2002-131336 20020904
AB US2004041234 A UPAB: 20050506
NOVELTY - The method involves processing a conductive material layer on substrate to form a turn. A dialectic layer is formed on the substrate and the turn. Two via openings in dielectric layer is formed and is connected to distal ends of the turn. Another conductive layer on the dielectric layer and the openings is processed to form another turn and another dielectric layer is formed on the former dielectric layer and latter turn.
DETAILED DESCRIPTION - The latter turn is connected to distal ends of the former turns of the two turns formed by the latter conductive material in the two via openings to form two vias there between. INDEPENDENT CLAIMS are also included for the following:
(a) a method of manufacturing a parallel spiral stacked inductor
(b) a parallel stacked inductor
(c) a parallel spiral stacked inductor.
USE - Used for manufacturing a parallel stacked inductor for personal mobile communication equipment.
ADVANTAGE - The method improves a quality factor of an inductor by thirty percentages, and can connect metal strips in a parallel manner without affecting an overall inductance.
DESCRIPTION OF DRAWING(S) - The drawing shows a cross sectional view of a parallel spiral stacked inductor.
Substrate 112
Connecting interlayer dielectric layer (ILD) 116
Initial ILD 118
Middle ILD 120
Parallel spiral stacked inductor 122
Dwg.3/4

L5 ANSWER 5 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 2003-864522 [80] WPIDS
DNN N2003-690134
TI Parallel stacked inductor manufacturing method for personal mobile communication device, involves processing conductive layer formed on dielectric layer, to form second-level turns connected to distal ends of first-level turns.

DC U11 U12 W02
IN NG, C Y; SEE, A; **SIA, C**; SWE, T N; YEO, K S
PA (CHAR-N) CHARTERED SEMICONDUCTOR MFG LTD PTE; (NGCY-I) NG C Y; (SEEA-I) SEE A; (SIAC-I) SIA C; (SWET-I) SWE T N; (YEOK-I) YEO K S
CYC 34
PI US 2003197586 A1 20031023 (200380)* 8
EP 1357599 A2 20031029 (200380) EN
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
US 6650220 B2 20031118 (200401)
JP 2003338556 A 20031128 (200403) 6
SG 103386 A1 20040429 (200433)
ADT US 2003197586 A1 US 2002-131334 20020423; EP 1357599 A2 EP 2003-252207 20030408; US 6650220 B2 US 2002-131334 20020423; JP 2003338556 A JP 2003-117330 20030422; SG 103386 A1 SG 2003-1194 20030306
PRAI US 2002-131334 20020423
AB US2003197586 A UPAB: 20031211
NOVELTY - A conductive layer formed on interlayer dielectric (ILD) layer (116) of silicon substrate (112), is processed to form first-level turns (124). Openings formed in another ILD layer (118) formed over turns, are connected to distal ends of turns. Another conductive layer formed on layer (118), is processed to form second-level turns (126) which is connected to distal ends of turn (124) through openings to form vias (132,133).
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for parallel spiral-stacked inductor.
USE - On-chip silicon-based parallel spiral-stacked inductor for personal mobile communication device.
ADVANTAGE - Improves mutual coupling effect, as several conductive layers are stacked over the substrate, hence generates mutual inductance which compensates for reduction in self- inductance of the metal lines when they are connected in parallel fashion, thereby improving quality factor significantly at all frequencies.
DESCRIPTION OF DRAWING(S) - The figure shows a cross- sectional view of the parallel spiral-stacked inductor.
substrate 112
interlayer dielectric layers 118,120
turns 124,126
vias 132,133
Dwg.3/4

L5 ANSWER 6 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 2001-663015 [76] WPIDS
DNC C2001-194794
TI New polypeptide, useful for treating cancers such as prostate cancer, comprises prostate-specific antigen derived peptide.
DC B04 D16
IN CHONG, P; PEDYCZAK, A; **SIA, C D Y**
PA (AVET) AVENTIS PASTEUR LTD; (CHON-I) CHONG P; (PEDY-I) PEDYCZAK A; (SIAC-I) SIA C D Y
CYC 95
PI WO 2001076622 A2 20011018 (200176)* EN 41
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001048188 A 20011023 (200213)
US 2002132976 A1 20020919 (200264)
ADT WO 2001076622 A2 WO 2001-CA473 20010410; AU 2001048188 A AU 2001-48188 20010410; US 2002132976 A1 Provisional US 2000-195456P 20000410, US 2001-829004 20010410
FDT AU 2001048188 A Based on WO 2001076622
PRAI US 2000-195456P 20000410; US 2001-829004 20010410
AB WO 200176622 A UPAB: 20021031
NOVELTY - A prostate-specific antigen (PSA) derived peptide is new.
DETAILED DESCRIPTION - A prostate-specific antigen (PSA) derived peptide comprising a sequence of formula Xn-X1-X-X-X-X-X-X-X2 or its fragment, elongation, analog or derivatives is new, where;
n = 0 or 1;
X1 = leucine or methionine;
X2 = valine or leucine; and
X = any amino acid.
INDEPENDENT CLAIMS are also included for the following:
(1) a fusion protein comprising the PSA peptide;
(2) a nucleic acid molecule encoding the PSA derived peptide comprising a nucleic acid sequence selected from the following:

(i) ATGTGGGTCCCGGTTGTCTTCCTC, GTTCTGGTGCACCCCCAGTGGGTCCTC, or AAACTTCAGTGTGTGGACCTCCATGTT, where T can also be U;

(ii) a nucleic acid sequence that is complementary to a nucleic acid sequence of (i);

(iii) a nucleic acid sequence that has substantial sequence homology to a nucleic acid sequence of (i) or (ii);

(iv) a nucleic acid sequence that is an analog of a nucleic acid sequence of (i), (ii), or (iii); or

(v) a nucleic acid sequence that hybridizes to a nucleic acid sequence of (i) - (iv) under stringent hybridization conditions;

(3) an expression vector comprising a nucleic acid molecule and regulatory sequences suitable for expression of the nucleic acid molecule;

(4) a host cell transformed with the expression vector; and

(5) a composition for eliciting an immune response in an animal comprising a peptide or a fusion protein, or the nucleic acid in mixture with a diluent or carrier.

ACTIVITY - Cytostatic. no suitable biological data was provided.

MECHANISM OF ACTION - None given.

USE - To prepare a medicament to elicit an immune response in an animal, and to treat cancer such as prostate cancer (claimed), tumor metastasis. It is also useful for prophylaxis, for preparing monoclonal or polyclonal antibodies, and in conventional techniques of immunology, molecular biology, cell biology and recombinant DNA technology .

ADVANTAGE - The compound triggers or enhances a cellular immune response, more preferably a cytotoxic T cell response.

Dwg.0/1

L5 ANSWER 7 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 2001-626378 [72] WPIDS
DNC C2001-186635
TI New polypeptides useful for inducing an immune response and treating prostate cancer comprises polypeptides derived from the prostate specific membrane antigen.
DC B04 D16
IN CHONG, P; PEDYCZAK, A; **SIA, C D Y**
PA (AVET) AVENTIS PASTEUR LTD; (CHON-I) CHONG P; (PEDY-I) PEDYCZAK A; (SIAC-I) SIA C D Y
CYC 95
PI WO 2001074845 A2 20011011 (200172)* EN 24
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001042190 A 20011015 (200209)
US 2003027246 A1 20030206 (200313)
ADT WO 2001074845 A2 WO 2001-CA411 20010330; AU 2001042190 A AU 2001-42190 20010330; US 2003027246 A1 Provisional US 2000-193386P 20000331, US 2001-821734 20010330
FDT AU 2001042190 A Based on WO 2001074845
PRAI US 2000-193386P 20000331; US 2001-821734 20010330
AB WO.200174845 A UPAB: 20011206
NOVELTY - A prostate specific membrane antigen (PSMA) derived peptide (P1) capable of eliciting an immune response, is new.

DETAILED DESCRIPTION - A PSMA derived peptide (P1) capable of eliciting an immune response comprises a sequence of the formula X-X1-X-X-X-X-X-X-X2 (I) where

X1 = leucine or methionine;

X2 = valine or leucine; and

X = any amino acid.

INDEPENDENT CLAIMS are also included for the following:

(1) a fusion protein (P2) comprising (P1);

(2) a nucleic acid encoding (P1) or (P2);

(3) an expression vector (I) comprising a nucleic acid encoding (P1) and regulatory expression sequences;

(4) a host cell transformed with (I); and

(5) a composition for eliciting an immune response in an animal comprising (P1) and (P2), with a dilutant or carrier.

ACTIVITY - Cytostatic. No biological data was provided.

MECHANISM OF ACTION - Induces immune response. No suitable biological data was provided.

USE - Molecules of the invention are used to elicit an immune response, particularly to treat cancer, especially prostate cancer (claimed).

ADVANTAGE - None given.

Dwg.0/1

L5 ANSWER 8 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 2001-441790 [47] WPIDS
DNC C2001-133530
TI Enhancing immune response to antigen such as tumor antigen for treating cancer in an animal involves administering an inducing agent to the animal followed by administering inducing agent-antigen mixture.
DC B04 C06 D16
IN BARBER, B H; EMTAGE, P; SAMBHARA, S; **SIA, C D Y**
PA (AVET) AVENTIS PASTEUR LTD; (BARB-I) BARBER B H; (EMTA-I) EMTAGE P; (SAMB-I) SAMBHARA S; (SIAC-I) SIA C D Y
CYC 95
PI WO 2001049317 A2 20010712 (200147)* EN 62
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001026588 A 20010716 (200169)
EP 1246646 A2 20021009 (200267) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
JP 2003519197 W 20030617 (200349) 70
US 2004009185 A1 20040115 (200406)
ADT WO 2001049317 A2 WO 2001-CA5 20010105; AU 2001026588 A AU 2001-26588 20010105; EP 1246646 A2 EP 2001-901075 20010105, WO 2001-CA5 20010105; JP 2003519197 W JP 2001-549684 20010105, WO 2001-CA5 20010105; US 2004009185 A1 WO 2001-CA5 20010105, US 2003-168417 20030520
FDT AU 2001026588 A Based on WO 2001049317; EP 1246646 A2 Based on WO 2001049317; JP 2003519197 W Based on WO 2001049317
PRAI US 2000-174587P 20000105; US 2003-168417 20030520
AB WO 200149317 A UPAB: 20010822
NOVELTY - Enhancing an immune response to an antigen in an animal involves administering an inducing agent (I) to the animal followed by administering (I) and the antigen to the animal.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a vaccine composition comprising (I) and an antigen.

ACTIVITY - Cytostatic.

The immunogenicity of recombinant ALVAC vectors expressing the native gp100 gene and/or the modified gp100 geneA2Kb, was assessed in transgenic mouse. HLA-A0201-restricted gp100-specific CTL (cytotoxic T cell) responses were assessed. The modified gp100 insert used to construct the ALVAC recombinants contained 2 point mutations, one at position 210 where threonine (T) of the native gp100 was replaced by methionine (M), and the other at position 288 where the native alanine (A) was replaced by valine (V) (as described in US Patent Application 09/693, 755). Mice were primed with vaccine quality tetanus toxoid (TT) in saline. The animals were then immunized and boosted with ALVAC recombinants in combination with TT. In parallel, control studies involving mice unprimed with TT, and boosted with ALVAC recombinants in the presence or absence of TT were also examined for their capability to generate gp100-specific CTL responses. The analysis of the specificity of ALVAC recombinant-induced CTLs was focused on HLA-A0201-restricted human CTL epitopes gp100 (209-217) (i.e., amino acid sequence ITDQVPFSV) and gp100 (2890-288) (i.e., amino acid sequence YEOPGPVTA) of the native gp100 molecule. For the transgenic mice that received the modified gp100 ALVAC recombinant vectors, effector responses directed against the mutated counterparts of these epitopes were examined. (i.e., amino acid sequence IMDQVPFSV) and gp100 (280M) (i.e., amino acid sequence YLEPGPVTV). The results indicated that tetanus toxoid priming resulted in a clearly enhanced immune response to the immunogen modified gp100 when the vector encoding for the immunogen was administered as a mixture with tetanus toxoid. This was not vector specific since the enhancement was observed with both vectors utilized.

MECHANISM OF ACTION - Vaccine; gene therapy.

USE - The method is useful for enhancing immune response to tumor antigen for treating cancer, in an animal by administering tetanus toxoid or diphtheria toxoid to the animal followed by administering the inducing agent and the antigen to the animal (claimed).

ADVANTAGE - The immune responses generated by the method is enhanced several fold over when the antigen is administered alone without the inducer. The method provides the enhancement or augmentation of the immune response to the antigen and/or improves a vaccination protocol by allowing use of less antigen.

Dwg.0/8

L5 ANSWER 9 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 2000-565457 [52] WPIDS

DNC C2000-168494

TI Vectors comprising sequences encoding the extracellular fragment of gp140 of a primary human immunodeficiency virus (HIV)-1 isolate, useful for vaccinating against HIV-1.

DC B04 D16

IN CAO, S; PARRINGTON, M; PERSSON, R; ROVINSKI, B; **SIA, C D Y**; CAO, S X

PA (CONN-N) CONNAUGHT LAB LTD; (AVET) AVENTIS PASTEUR LTD

CYC 91

PI WO 2000050604 A1 20000831 (200052)* EN 31
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000027892 A 20000914 (200063)
EP 1157115 A1 20011128 (200201) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
US 6395714 B1 20020528 (200243)
JP 2002541777 W 20021210 (200301) 64
NZ 514307 A 20030530 (200341)
AU 766694 B 20031023 (200381)

ADT WO 2000050604 A1 WO 2000-CA190 20000224; AU 2000027892 A AU 2000-27892 20000224; EP 1157115 A1 EP 2000-906105 20000224, WO 2000-CA190 20000224; US 6395714 B1 US 1999-256194 19990224; JP 2002541777 W JP 2000-601168 20000224, WO 2000-CA190 20000224; NZ 514307 A NZ 2000-514307 20000224, WO 2000-CA190 20000224; AU 766694 B AU 2000-27892 20000224

FDT AU 2000027892 A Based on WO 2000050604; EP 1157115 A1 Based on WO 2000050604; JP 2002541777 W Based on WO 2000050604; NZ 514307 A Based on WO 2000050604; AU 766694 B Previous Publ. AU 2000027892, Based on WO 2000050604

PRAI US 1999-256194 19990224

AB WO 200050604 A UPAB: 20001018

NOVELTY - A vector (I), comprising a gene encoding the extracellular fragment of gp140 of a primary human immunodeficiency virus (HIV)-1 isolate under the control of a promoter for expression of the gene product in a host organism, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a method of generating a cytotoxic T-cell response to HIV-1 in a host, comprising administering an immunogenic composition comprising (I);

(2) the use of (I) in the production of an immunogen for generating a cytotoxic T-cell response to HIV-1 in a host;

(3) a peptide (II) comprising one of 12 defined amino acid sequences ((A1)-(A11)) given in the specification (see below for examples); and

(4) a nucleic acid molecule comparing a sequence selected from:

(a) a defined 1972 nucleotide sequence (N1) given in the specification;

(b) a nucleotide sequence encoding a gp140 protein comprising a defined amino acid sequence (A12) given in the specification; and/or

(c) a defined nucleotide sequence (N2) given in the specification (or its complement).

IGPGRAFYTT (A1)

AYDTEVHNV (A2)

FYSLKIVPI(A3)

ACTIVITY - antiviral; anti-HIV.

MECHANISM OF ACTION - Vaccine.

The recombinant alphavirus vectors pMP88, pMP84 and pMP83 (prepared as described in the specification), were employed in comparative immunogenicity studies with plasmid pCMV.gp140.BX08 (prepared as described in the specification), in BALB/c mice following the procedure given in the specification for intramuscular immunization in mice using pCMV.gp140.BX08 and the CTL (cytotoxic T lymphocyte) assay also described in the specification, with unmodified pMP76 and pCMV being employed as negative controls.

Comparative analysis of the alphavirus constructs and the pCMV.gp140.BX08 DNA construct showed similar results in the CTL assay. As expected, the negative control vectors that did not contain the gp140 sequences from HIV-1 BX08 showed no specific lysis in the CTL assay. All three alphavirus replicons, pMP83, pMP84 and pMP88, showed specific lysis as did the vector pCMV.gp140.BX08. The difference between the two types of vector was the amount of immunizing nucleic acid needed to elicit the same response. At 1 micro g dose, the alphavirus vectors pMP83 and pMP88 showed comparable responses to pCMV.gp140.BX08 at a much higher dose of 100 micro g.

These results were confirmed by an vector from a interferon-gamma (IFN- gamma) assay, the results of which are given in the specification. The assay is well known, as the measure of IFN- gamma secreted from the

splenocytes indicated activation of the CTLs. Again, the alphavirus vectors showed comparable activation at an approximately 100 fold lower dose than the pCMV.gp140.BX08 vector. Overall these results indicated that immunization with a nucleic acid vector expressing the gp140 sequence from the primary isolate BX08 generated MHC (major histocompatability complex) Class I restricted cytotoxic T-cells and that the alphavirus expression system used was approximately 100-fold more effective at the lower dose.

USE - (I) is used as an immunogen for generating a cytotoxic T-cell response to HIV-1 in a host (claimed).

DESCRIPTION OF DRAWING(S) - The diagram shows the identifying characteristics of pCMV.gp140.BX08 (ATCC 203839).

Dwg.0/5

L5 ANSWER 10 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 1999-620170 [53] WPIDS
DNC C1999-180953
TI Generating an HIV-specific cytotoxic T-cell response, useful to immunize against HIV.
DC B04 D16
IN CHONG, P; KLEIN, M H; **SIA, C D Y**
PA (CONN-N) CONNAUGHT LAB LTD; (AVET) AVENTIS PASTEUR LTD; (CHON-I) CHONG P; (KLEI-I) KLEIN M H; (SIAC-I) SIA C D Y
CYC 83
PI WO 9951267 A1 19991014 (199953)* EN 35
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9930220 A 19991025 (200011)
EP 1067963 A1 20010117 (200105) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
US 2001019714 A1 20010906 (200154)
BR 9909480 A 20011016 (200170)
JP 2002510650 W 20020409 (200227) 35
AU 759183 B 20030410 (200337)
MX 2000009831 A1 20020401 (200363)
NZ 507742 A 20031128 (200382)
ADT WO 9951267 A1 WO 1999-CA287 19990401; AU 9930220 A AU 1999-30220 19990401; EP 1067963 A1 EP 1999-911556 19990401, WO 1999-CA287 19990401; US 2001019714 A1 US 1998-55744 19980407; BR 9909480 A BR 1999-9480 19990401, WO 1999-CA287 19990401; JP 2002510650 W WO 1999-CA287 19990401, JP 2000-542037 19990401; AU 759183 B AU 1999-30220 19990401; MX 2000009831 A1 WO 1999-CA287 19990401, MX 2000-9831 20001006; NZ 507742 A NZ 1999-507742 19990401, WO 1999-CA287 19990401
FDT AU 9930220 A Based on WO 9951267; EP 1067963 A1 Based on WO 9951267; BR 9909480 A Based on WO 9951267; JP 2002510650 W Based on WO 9951267; AU 759183 B Previous Publ. AU 9930220, Based on WO 9951267; MX 2000009831 A1 Based on WO 9951267; NZ 507742 A Based on WO 9951267
PRAI US 1998-55744 19980407
AB WO 9951267 A UPAB: 19991215

NOVELTY - A human immunodeficiency virus (HIV)-specific cytotoxic T-cell (CTL) response is generated in a host by first administering a T-cell helper molecule to prime the immune system T-helper cells, and then administering a mixture of the helper and a T-cell inducing HIV-derived molecule.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for peptides having the sequence of amino acids 52-116 of the Rev protein of HIV-1 isolate LAI (not given in the specification) or a corresponding sequence from another HIV-1 isolate, capable of eliciting a CTL response.

USE - The method provides a novel protocol for achieving a HIV-specific CTL response in hosts, including humans, useful for immunization against HIV, the causal agent of acquired immunodeficiency syndrome (AIDS). The peptides may be used in the preparation of vaccines for use in such immunization protocols.

ADVANTAGE - No effective vaccination protocol or vaccines to protect humans from HIV infection currently exist. The Rev protein is also expressed early in the HIV life cycle, so that peptides based on Rev may induce CTL effector responses capable of killing virus-infected cells at an early stage, limiting virus spread.

Dwg.0/3

L5 ANSWER 11 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 1999-550482 [46] WPIDS
CR 1995-036400 [05]; 1997-332082 [30]; 1998-332123 [29]; 1998-466723 [40];

1998-494711 [42]; 1998-556461 [47]; 1999-189590 [16]
DNC C1999-160492
TI Immunogenic composition containing synthetic fusion polypeptides containing both the T and B cell epitopes of the human immunodeficiency virus, useful antigens in producing vaccines.
DC B04 D16
IN CHONG, P; KLEIN, M H; **SIA, C D Y**
PA (CONN-N) CONNAUGHT LAB LTD
CYC 1
PI US 5951986 A 19990914 (199946)* 43
ADT US 5951986 A CIP of US 1993-73378 19930609, Div ex US 1994-257528 19940609, US 1995-467881 19950606
FDT US 5951986 A Div ex US 5639854
PRAI US 1994-257528 19940609; US 1993-73378 19930609; US 1995-467881 19950606
AB US 5951986 A UPAB: 20030603
NOVELTY - An immunogenic composition (A) comprising a synthetic fusion polypeptide (I) which includes a sequence (A1) encoding 1 or more T cell epitopes and a sequence (A2) encoding 1 or more B cell epitopes and a carrier, is new. Both the T cell and B cell epitopes are derived from a human immunodeficiency virus (HIV) protein.

DETAILED DESCRIPTION - An immunogenic composition (A) comprising a synthetic fusion polypeptide (I) which includes a sequence (A1) encoding 1 or more T cell epitopes and a sequence (A2) encoding 1 or more B cell epitopes.

A1 contains:

(i) one of the gag-derived T cell epitopes P24N, P24L, P24M and/or P24H (bound at its C-terminus to A2 which contains an epitope from the V3 loop of the envelope protein (env) of HIV):

(1) QMREPRGSDIAGTTSTL (P24N);

(2) EEMMTACQGVGGPGHK (P24L);

(3) GHKARVLAEAMSQVT (P24M); and/or

(4) PIVQNIQGQMVHQAI (P24H).

(ii) a T cell epitope of gag linked at its C-terminus to A2 which consists of a hybrid V3 loop sequence from at least two different HIV isolates;

(iii) a T cell epitope of gag linked at its C-terminus to A2 which has a consensus sequence of the V3 loop from at least two different primary HIV isolates;

(iv) a T cell epitope of gag linked at its C-terminus to 2 or more A2s in which the B cell epitopes each consist of V3 loop sequences from different HIV isolates or HIV-isolate consensus sequences;

(v) a T cell epitope of gag linked at its C-terminus to A2 which contains a gp41-derived B cell epitope containing the sequence (X) (or a sequence that can elicit antisera that recognizes (X)).

X1LKDWX2 (X)

X1 = E, A, G or Q;

X2 = A or T

(I) may also comprise many individual, linear peptides linked at the C-termini to form a multimer, each peptide having a T cell epitope from gag or env linked to a sequence containing a B cell epitope from the same proteins.

ACTIVITY - Antiviral.

MECHANISM OF ACTION - Vaccine. Administration of (I) induces a specific immune response.

A lysine-based tetrameric peptide which contained four copies of the peptide (Y) were used as a vaccine to immunize against HIV:

GPKEPFRDYVDRFYKNKRKRIHIGPGRAFYTTKN (Y)

The first 15 residues represent the P24E T-cell epitope and the last 17 represent the B-cell epitope from the V3 loop of strain MN. This protein was administered in doses of 0.1 mu g in alum, to guinea pigs. After 4 doses the titer of immunoglobulin G, directed against the V3 loop was determined by enzyme-linked immunoabsorbant assay (ELISA). The mean reciprocal titer was 12150.

USE - The compositions are useful as vaccines against human immunodeficiency virus (HIV) infection.

ADVANTAGE - The composition induces HIV-1-specific polyclonal antibodies that are opsonizing and antiviral. The peptide components may be selected to induce a response against different viral isolates and in subjects who recognize different T cell epitopes.

Dwg.0/3

L5 ANSWER 12 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 1999-189590 [16] WPIDS
CR 1995-036400 [05]; 1997-332082 [30]; 1998-332123 [29]; 1998-466723 [40]; 1998-494711 [42]; 1998-556461 [47]; 1999-550482 [46]
DNC C1999-055637
TI Synthetic chimeric HIV polypeptides - comprising gag protein T-cell

epitope linked to gp41 B-cell epitope.
DC B04 D16
IN CHONG, P; KLEIN, M H; **SIA, C D Y**
PA (CONN-N) CONNAUGHT LAB LTD
CYC 1
PI US 5876731 A 19990302 (199916)* 41
ADT US 5876731 A CIP of US 1993-73378 19930609, Cont of US 1994-257528 19940609, US 1995-462507 19950605
FDT US 5876731 A Cont of US 5639854
PRAI US 1994-257528 19940609; US 1993-73378 19930609; US 1995-462507 19950605
AB US 5876731 A UPAB: 20030603
A synthetic peptide comprising an amino acid sequence containing a T-cell epitope of an HIV gag protein linked at its C terminus to an amino acid sequence containing a B-cell epitope of an HIV gp41 protein and containing the amino acid sequence (I):
X1LKDWX2 (I);
X1 = E, A, G or Q, and
X2 = A or T, or an amino acid sequence capable of eliciting an HIV-specific antiserum and recognizing the sequence X1LKDWX2 is new.
USE - The synthetic peptide is useful in vaccines against HIV infection and in diagnostic applications.
Dwg.0/3

L5 ANSWER 13 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 1998-556461 [47] WPIDS
CR 1995-036400 [05]; 1997-332082 [30]; 1998-332123 [29]; 1998-466723 [40]; 1998-494711 [42]; 1999-189590 [16]; 1999-550482 [46]
DNC C1998-166496
TI Synthetic human immunodeficiency virus-1 peptide(s) - containing T-cell epitope and B-cell epitope(s) are candidate vaccines against HIV-1.
DC B04
IN CHONG, P; KLEIN, M H; **SIA, C D Y**
PA (CONN-N) CONNAUGHT LAB LTD
CYC 1
PI US 5817754 A 19981006 (199847)* 40
ADT US 5817754 A CIP of US 1993-73378 19930609, Cont of US 1994-257528 19940609, US 1995-464329 19950605
FDT US 5817754 A Cont of US 5639854
PRAI US 1994-257528 19940609; US 1993-73378 19930609; US 1995-464329 19950605
AB US 5817754 A UPAB: 20030603
Synthetic peptide (I) comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at its C-terminal end to at least two amino acid sequences which contain a B-cell epitope. The amino acid sequences each comprise a V3 loop sequence from a different HIV-1 isolate or HIV-isolate consensus sequence.
USE - The peptides are candidate vaccines against HIV-1 and are useful in diagnostic applications.
Dwg.0/3

L5 ANSWER 14 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 1998-494711 [42] WPIDS
CR 1995-036400 [05]; 1997-332082 [30]; 1998-332123 [29]; 1998-466723 [40]; 1998-556461 [47]; 1999-189590 [16]; 1999-550482 [46]
DNC C1998-148950
TI Synthetic peptide(s) based on HIV-1 envelope protein sequences - used as vaccines against, and for immunological detection of the virus.
DC B04 D16
IN CHONG, P; KLEIN, M H; **SIA, C D Y**
PA (CONN-N) CONNAUGHT LAB LTD
CYC 1
PI US 5800822 A 19980901 (199842)* 40
ADT US 5800822 A CIP of US 1993-73378 19930609, Cont of US 1994-257528 19940609, US 1995-465217 19950605
FDT US 5800822 A Cont of US 5639854
PRAI US 1994-257528 19940609; US 1993-73378 19930609; US 1995-465217 19950605
AB US 5800822 A UPAB: 20030603
A new synthetic peptide molecule has a plurality of individual linear synthetic peptides linked at each the C-terminus to form a multimeric molecule; each individual linear synthetic peptide having an amino acid sequence containing a T-cell epitope of a gag or envelope protein of a human immunodeficiency virus (HIV) isolate linked to an amino acid containing a B-cell epitope of a gag or envelope protein of an HIV isolate.

USE - The peptides are used as vaccines against HIV, or to detect it, especially the HIV-1(MN) isolate. This virus is the prevalent causative agent of acquired immunodeficiency syndrome (AIDS). Their sequence is based on CD4 binding site neutralisation epitopes and hypervariable V3 loop neutralisation regions found in envelope protein gpl20. As they are specific for antibody determinants on B and T cells, they are capable of mounting an immune response against HIV-1 infection. Due to their specificity, they can also be used to detect HIV-1 present in a sample e.g. ELISA (enzyme linked immunoassay), where the peptides are bound to well plates and then standard ELISA protocols carried out.

ADVANTAGE - The peptides being based on conserved HIV sequences, can be used as an immunological reagent against many different HIV isolates. Dwg.0/3

L5 ANSWER 15 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 1998-466723 [40] WPIDS
CR 1995-036400 [05]; 1997-332082 [30]; 1998-332123 [29]; 1998-494711 [42]; 1998-556461 [47]; 1999-189590 [16]; 1999-550482 [46]
DNC C1998-141513
TI Synthetic HIV-1-based peptide(s) - useful for vaccination against, and detection of HIV-1.
DC B04 D16
IN CHONG, P; KLEIN, M H; **SIA, C D Y**
PA (CONN-N) CONNAUGHT LAB LTD
CYC 1
PI US 5795955 A 19980818 (199840)* 40
ADT US 5795955 A CIP of US 1993-73378 19930609, Cont of US 1994-257528 19940609, US 1995-463966 19950605
FDT US 5795955 A Cont of US 5639854
PRAI US 1994-257528 19940609; US 1993-73378 19930609; US 1995-463966 19950605
AB US 5795955 A UPAB: 20030603
A new synthetic peptide (I) consists of at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate, linked at the C-terminal end of at least one amino acid sequence which contains a B-cell epitope and consisting (of a consensus sequence) of a hybrid V3 loop sequence from at least 2 different HIV-1 isolates.

Also claimed are:

(1) a synthetic peptide as (I), but where the gag protein is linked to the C-terminal end of at least 2 amino acid sequences consisting of a V3 loop from a different HIV-1 isolate (consensus sequence); and

(2) a synthetic peptide having the 63 amino acid sequence designated CTLB-160 or the 64 amino acid sequence designated CTLB-161, both as given in the specification, derived from T-cell and B-cell HIV-1 epitope sequences.

USE - The peptides are used as candidate vaccines against HIV-1, the causal agent of acquired immunodeficiency syndrome (AIDS) and in diagnostic and applications. The peptides are designed around key elements of T helper determinant (T-cell epitope) (especially p24E) and B-cell epitopes (especially gag protein) of HIV-1 to elicit as strong an immune response as possible.

ADVANTAGE - Proteins of HIV are highly variable between different isolates of the virus, which means they often evade the hosts immune system. The peptides are designed on sequences that are reasonably conserved throughout different HIV isolates, and therefore generate an immune response that should be reactive to different HIV isolates. Dwg.0/3

L5 ANSWER 16 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 1998-332123 [29] WPIDS
CR 1995-036400 [05]; 1997-332082 [30]; 1998-466723 [40]; 1998-494711 [42]; 1998-556461 [47]; 1999-189590 [16]; 1999-550482 [46]
DNC C1998-102820
TI Synthetic HIV peptide to provide specific antibodies - used in kits for detecting HIV antibodies or antigens.
DC B04 D16
IN CHONG, P; KLEIN, M H; **SIA, C D Y**
PA (CONN-N) CONNAUGHT LAB LTD
CYC 1
PI US 5759769 A 19980602 (199829)* 42
ADT US 5759769 A CIP of US 1993-73378 19930609, Div ex US 1994-257528 19940609, US 1995-460602 19950602
FDT US 5759769 A Div ex US 5639854
PRAI US 1994-257528 19940609; US 1993-73378 19930609; US 1995-460602 19950602
AB US 5759769 A UPAB: 20030603

A diagnostic kit for detecting HIV-specific antibodies in a test sample, comprises:
(a) a surface;
(b) at least one peptide immobilised on the surface and having an amino acid sequence epitopically specific for the HIV-specific antibodies; and
(c) a reagent for detecting a complex formed between the immobilised peptide(s) and HIV-specific antibodies in the sample, where the peptide is selected from:
(i) a synthetic peptide which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate selected from the group consisting of P24N, P24L, P24M and P24H having the respective amino acid sequences:
OMREPRGSDIAGTTSTL (P24N);
EEMMTACOGVGGPGHK (P24L);
GHKARVLAEAMSQVT (P24M); and
PIVONIOGOMVHOAI (P24H),
linked at the C-terminal end of the T-cell epitope, to at least one amino acid sequence which contains a B-cell epitope of the V3 loop of the envelope protein of an HIV isolate;
(ii) a synthetic peptide which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at its C-terminal end to at least one amino acid sequence which contains a B-cell epitope comprising a hybrid V3 loop sequence from at least two HIV-1 isolates;
(iii) a synthetic peptide which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at its C-terminal end to at least one amino acid sequence which contains a B-cell epitope comprising a consensus sequence of the V3 loop of at least two HIV-1 primary isolates;
(iv) a synthetic peptide which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at its C-terminal end to at least two amino acid sequences, each containing a B-cell epitope, the B-cell epitope containing amino acid sequences each comprising a V3 loop sequence from a different HIV-1 isolate or HIV isolate consensus sequence;
(v) a synthetic peptide which comprises at least one amino acid sequence which contains a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at its C-terminal end to at least one amino acid sequence which contains a B-cell epitope of the gp41 protein of an HIV isolate comprising the amino acid sequence X1LKDWX2, where X1 is E, A, G or Q and X2 is A or T or an amino acid sequence capable of eliciting an HIV-specific antiserum and recognising the amino acid sequence X1LKDWX2; and
(vi) a synthetic peptide which comprises several individual synthetic peptides linked to form a multimeric molecule, each individual synthetic peptide comprising an amino acid sequence which contains a T-cell epitope of a gag or envelope protein of a human immunodeficiency virus (HIV) isolate linked to an amino acid sequence which contains a B-cell epitope of a gag or envelope protein of an HIV isolate;
(2) a diagnostic kit for detecting HIV antigens in a test sample, comprising:
(a) a surface;
(b) an antibody that is immobilised on the surface and is epitopically specific and non-cross-reactive for distinct epitopes of the HIV antigen and is raised against a peptide defined as (c) above; and
(c) a reagent for detecting a complex formed between the immobilised antibody and HIV antigens in the test sample; and
(3) an antibody specific for a peptide defined as (c) above.
USE - The kit is useful in detecting HIV-specific antibodies in a sample, i.e. diagnosing HIV state in a patient. The peptides are based on T-cell epitopes of HIV-1 p24E gag protein linked to an epitope of a B-cell V3 loop protein from an HIV-1 isolate. It is used in an enzyme linked immunoassay (ELISA) type detection protocol, or in any system where bound complexes can be detected . As the peptides are based on HIV-based derived sequences, they can also be used as vaccines against HIV infection.
ADVANTAGE - As the peptides are based on HIV dependant B and T cell epitopes, they can elicit responses for both these, through a single molecule. Most vaccines are targetted against only one epitope.
Dwg.0/3

L5 ANSWER 17 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 1997-332082 [30] WPIDS
CR 1995-036400 [05]; 1998-332123 [29]; 1998-466723 [40]; 1998-494711 [42]; 1998-556461 [47]; 1999-189590 [16]; 1999-550482 [46]
DNC C1997-106557
TI Tandem synthetic HIV peptide(s) useful as immunogens - comprising gag protein T-cell epitope linked to env protein B-cell epitope.

DC B04 D16
IN CHONG, P; KLEIN, M H; **SIA, C D Y**
PA (CONN-N) CONNAUGHT LAB LTD
CYC 1
PI US 5639854 A 19970617 (199730)* 41
ADT US 5639854 A CIP of US 1993-73378 19930609, US 1994-257528 19940609
PRAI US 1994-257528 19940609; US 1993-73378 19930609
AB US 5639854 A UPAB: 20030603
New synthetic peptide comprises at least one amino acid sequence comprising an HIV gag protein T-cell epitope linked at its C terminus to an amino acid sequence comprising a B-cell epitope of the V3 loop of an HIV env protein, where the T-cell epitope sequence is selected from: QMREPRGSDIAGTTSTL (P24N), EEMMTACQGVGGPGHK (P24L), GHKARVLAEAMSQVT (P24M) or PIVQNIQGQMVHQAI (P24H).
USE - The peptides are useful as immunogens in vaccines against HIV-1 and for diagnostic purposes.
Dwg.0/3

L5 ANSWER 18 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 1995-036400 [05] WPIDS
CR 1997-332082 [30]; 1998-332123 [29]; 1998-466723 [40]; 1998-494711 [42]; 1998-556461 [47]; 1999-189590 [16]; 1999-550482 [46]
DNN N1995-028681 DNC C1995-016334
TI Novel tandem synthetic HIV-1 peptide(s) - comprising T-cell epitope of gag protein linked to B-cell epitope of V3 loop protein of an HIV-I isolate.
DC B04 D16 S03
IN CHONG, P; KLEIN, M H; **SIA, C D Y; SIA, C**
PA (AVET) AVENTIS PASTEUR LTD; (CONN-N) CONNAUGHT LAB LTD
CYC 30
PI WO 9429339 A1 19941222 (199505)* EN 69
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: AU BR CA CN FI JP KR NO NZ RU UA US
AU 9469673 A 19950103 (199521)
EP 702693 A1 19960327 (199617) EN
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
BR 9406821 A 19960326 (199619)
JP 08511007 W 19961119 (199708) 82
CN 1128538 A 19960807 (199750)
AU 693098 B 19980625 (199836)
RU 2201421 C2 20030327 (200335)
KR 348183 B 20030108 (200337)#
CA 2164818 C 20030923 (200369) EN
MX 219374 B 20040312 (200474)
CN 1111540 C 20030618 (200545)
ADT WO 9429339 A1 WO 1994-CA317 19940608; AU 9469673 A AU 1994-69673 19940608; EP 702693 A1 EP 1994-918258 19940608, WO 1994-CA317 19940608; BR 9406821 A BR 1994-6821 19940608, WO 1994-CA317 19940608; JP 08511007 W WO 1994-CA317 19940608, JP 1995-501144 19940608; CN 1128538 A CN 1994-192854 19940608; AU 693098 B AU 1994-69673 19940608; RU 2201421 C2 WO 1994-CA317 19940608, RU 1996-102594 19940608; KR 348183 B WO 1994-CA317 19940608, KR 1995-705602 19951209; CA 2164818 C CA 1994-2164818 19940608, WO 1994-CA317 19940608; MX 219374 B MX 1994-4339 19940609; CN 1111540 C CN 1994-192854 19940608
FDT AU 9469673 A Based on WO 9429339; EP 702693 A1 Based on WO 9429339; BR 9406821 A Based on WO 9429339; JP 08511007 W Based on WO 9429339; AU 693098 B Previous Publ. AU 9469673, Based on WO 9429339; RU 2201421 C2 Based on WO 9429339; KR 348183 B Previous Publ. KR 96703136, Based on WO 9429339; CA 2164818 C Based on WO 9429339
PRAI US 1993-73378 19930609; KR 1995-705602 19951209
AB WO 9429339 A UPAB: 20050715
Novel synthetic peptide (I) comprises at least one amino acid sequence (A) comprising a T-cell epitope of the gag protein of a human immunodeficiency virus (HIV) isolate linked at its N-terminal or C-terminal end to at least one amino acid sequence (B) comprising a B-cell epitope of the V3 loop of the envelope protein of an HIV isolate, which, when located at the N-terminal end is directly coupled to (A). Also claimed is a synthetic peptide (II) comprising (A) linked at its N-terminal or C-terminal end with at least one amino acid sequence (C) comprising a B-cell epitope of the gp41 protein of an HIV isolate, which is of sequence X1LKDWX2 (i), where X1 = E, A, G or Q and X2 = A or T, or a sequence capable of eliciting an HIV-specific antiserum and recognising the sequence (i). Also new is a synthetic peptide molecule (M) comprising several individual synthetic peptides linked to form a multimeric molecule, each individual peptide comprising an amino acid sequence comprising a T-cell epitope of a gag or envelope protein of an HIV isolate linked to an amino acid sequence comprising a B-cell epitope of a gag or envelope protein of an HIV isolate. Also provided are diagnostic kits, nucleic acid encoding (I), (II) and (M) and antibodies specific for (I), (II) and (M).

USE - The peptides may be used for the treatment of AIDS by acting either to displace the binding of the HIV virus to human or animal cells or by disturbing the 3-dimensional organisation of the virus. The peptides are also useful as immunogens or as antigens in immunoassays for the detection of anti-HIV antibodies. In another embodiment, the peptides can be used to specifically stimulate HIV specific T-cell in samples, e.g. from HIV-infected individuals. Antibodies and other molecules which bond to the peptides can be used for therapeutic and diagnostic purposes. See also Parent Patent.
Dwg.1/3

L5 ANSWER 19 OF 19 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 1993-258681 [32] WPIDS
DNN N1993-198976 DNC C1993-114924
TI Synthetic Haemophilus influenzae conjugate vaccine - comprising T-helper cell determinants and B-cell epitope(s) linked to synthetic oligo saccharide(s).
DC A96 B04 D16 S03
IN CHONG, P; KANDIL, A; KLEIN, M H; **SIA, C**; KLEIN, M; **SIA, C D Y**
PA (CONN-N) CONNAUGHT LAB LTD
CYC 27
PI WO 9315205 A2 19930805 (199332)* EN 99
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: AU BR CA FI JP KR NO RU UA US
AU 9334469 A 19930901 (199350)
NO 9402867 A 19941003 (199444)
EP 625203 A1 19941123 (199445) EN
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
FI 9403591 A 19940928 (199445)
WO 9315205 A3 19940303 (199515)
JP 07505522 W 19950622 (199533) 33
AU 669354 B 19960606 (199630)
US 5679352 A 19971021 (199748) 59
US 5972349 A 19991026 (199952)
JP 11269188 A 19991005 (199953) 44
US 6018019 A 20000125 (200012)
RU 2141527 C1 19991120 (200041)
JP 2001064201 A 20010313 (200118) 40
KR 233805 B1 20000315 (200122)
KR 246122 B1 20000315 (200122)
JP 3421337 B2 20030630 (200343) 54
CA 2129101 C 20040810 (200454) EN
ADT WO 9315205 A2 WO 1993-CA41 19930203; AU 9334469 A AU 1993-34469 19930203; NO 9402867 A WO 1993-CA41 19930203, NO 1994-2867 19940802; EP 625203 A1 EP 1993-903129 19930203, WO 1993-CA41 19930203; FI 9403591 A WO 1993-CA41 19930203, FI 1994-3591 19940802; WO 9315205 A3 WO 1993-CA41 19930203; JP 07505522 W JP 1993-512824 19930203, WO 1993-CA41 19930203; AU 669354 B AU 1993-34469 19930203; US 5679352 A Cont of US 1994-256839 19941003, US 1995-475989 19950607; US 5972349 A Cont of WO 1993-CA41 19930203, Cont of US 1994-256839 19941003, US 1995-475985 19950607; JP 11269188 A Div ex JP 1993-512824 19930203, JP 1998-336442 19930203; US 6018019 A WO 1993-CA41 19930203, US 1994-256839 19941003; RU 2141527 C1 WO 1993-CA41 19930203, RU 1994-40386 19930203; JP 2001064201 A Div ex JP 1993-512824 19930203, JP 2000-197292 19930203; KR 233805 B1 WO 1993-CA41 19930203, Div ex KR 1994-702655 19940802, KR 1999-700938 19990203; KR 246122 B1 WO 1993-CA41 19930203, KR 1994-702655 19940802; JP 3421337 B2 JP 1993-512824 19930203, WO 1993-CA41 19930203; CA 2129101 C CA 1993-2129101 19930203, WO 1993-CA41 19930203
FDT AU 9334469 A Based on WO 9315205; EP 625203 A1 Based on WO 9315205; JP 07505522 W Based on WO 9315205; AU 669354 B Previous Publ. AU 9334469, Based on WO 9315205; US 6018019 A Based on WO 9315205; RU 2141527 C1 Based on WO 9315205; JP 3421337 B2 Previous Publ. JP 07505522, Based on WO 9315205; CA 2129101 C Based on WO 9315205
PRAI GB 1992-2219 19920203
AB WO 9315205 A UPAB: 20000215
Synthetic peptide has a sequence corresp. to at least 1 antigenic determinant of at least 1 Haemophilus influenzae protein. Also claimed are: (1) an immunogenic conjugate comprising a synthetic carbohydrate antigen linked to at least 1 synthetic T cell epitope; (3) a vaccine against a disease caused by a pathogen, comprising the above synthetic peptide and/or at least 1 conjugate as in (1), and a carrier; (4) a diagnostic reagent for detecting H. influenzae infection comprising the components of (3); (5) an antibody raised against the synthetic peptide or the conjugate as in (1); (6) a live vector for antigen delivery contg. a gene encoding the synthetic peptide; (7) prodn. of an oligomer by coupling a cpd. of formula (I) R1, R2 = first and second protecting gps. etc.; and (8) the solid PEG-bound protected polysaccharide prod..
USE/ADVANTAGE - The peptides contain sequences of the outer membrane

proteins (P1, P2 and P6) of H. inlfuenza. Antibodies to these proteins can be used in test kits to detect H. influenzae in samples. Peptides contg. a sequence of an immunodominant linear B cell epitope P6 can be used as target antigens in diagnostic kits to detect anti-H. influenzae antibodies. The method allows the highly efficient chemical synthesis of polyriboseribitol phosphite oligomers which is fast, cost-effective and simple to scale up for commercial applications. This is better than soln.-phase synthesis, which is laborious, expensive and time consuming. The conjugate of (1) comprises a carbohydrate antigen with its immunogenicity enhanced using a multiple antigen peptide system using T helper cell epitopes as carriers to increase carbohydrate density. The vaccine is used to protect against H. influenzae infection.
Dwg.0/18

```
=> d his

     (FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

     FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
                E SIA CHARLES/IN
L1           16 S E3-E5
                E KLEIN MICHEL/IN
L2          177 S E3-E5
L3           47 S L2 AND (T-HELPER)
L4            2 S L3 AND (T-HELPER/CLM)

     FILE 'WPIDS' ENTERED AT 16:13:39 ON 06 SEP 2005
                E SIA CHARLES/IN
                E SIA C D Y/IN
L5           19 S E1 OR E3

=> e klein m/in
E1            1     KLEIN LANKHORST R/IN
E2            1     KLEIN LEBBINK E J/IN
E3          264 --> KLEIN M/IN
E4            6     KLEIN M A/IN
E5           19     KLEIN M B/IN
E6            1     KLEIN M C/IN
E7            1     KLEIN M C L G/IN
E8            5     KLEIN M D/IN
E9            1     KLEIN M D S/IN
E10           8     KLEIN M E/IN
E11           1     KLEIN M F/IN
E12          10     KLEIN M G/IN

=> s e3
L6          264 "KLEIN M"/IN

=> s l6 and (hiv or human immunodeficiency virus)
         20372 HIV
        167341 HUMAN
          7527 IMMUNODEFICIENCY
         40384 VIRUS
          4872 HUMAN IMMUNODEFICIENCY VIRUS
                 (HUMAN(W)IMMUNODEFICIENCY(W)VIRUS)
L7            4 L6 AND (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)

=> s l7 not l5
L8            4 L7 NOT L5

=> d l8,ti,1-4

L8   ANSWER 1 OF 4  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   New Tat protein comprising a mutated cysteine-rich domain, useful for
     eliciting a humoral and cellular immune response in a mammal, for raising
     anti-native Tat antibodies, or for preventing and/or treating HIV
     infection.

L8   ANSWER 2 OF 4  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Vaccine for controlling viral rebound after cessation of antiretroviral
     therapy in HIV patients, containing lipopeptides derived from CTL
     epitopes of HIV proteins.

L8   ANSWER 3 OF 4  WPIDS  COPYRIGHT 2005 THE THOMSON CORP on STN
TI   Permitting cessation of antiviral therapy on HIV-infected patients
     undergoing antiviral therapy, useful for treating HIV-infected patients,
     by administering nucleic acid based vaccines encoding HIV-specific
     immunogens.
```

L8 ANSWER 4 OF 4 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
TI Synthetic peptide(s) for an **HIV**-1 vaccine - contains the T-cell epitope of **HIV**-1 envelope protein.

=> d 18,bib,ab,2

L8 ANSWER 2 OF 4 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
Full Text
AN 2002-489664 [52] WPIDS
DNC C2002-138950
TI Vaccine for controlling viral rebound after cessation of antiretroviral therapy in **HIV** patients, containing lipopeptides derived from CTL epitopes of **HIV** proteins.
DC B04 D16
IN CAUDRELIER, P; EL HABIB, R; **KLEIN, M**
PA (AVET) AVENTIS PASTEUR; (AVET) AVENTIS PASTEUR SA; (CAUD-I) CAUDRELIER P; (HABI-I) EL HABIB R; (KLEI-I) KLEIN M
CYC 98
PI WO 2002020052 A1 20020314 (200252)* FR 28
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001087820 A 20020322 (200252)
FR 2813793 A1 20020315 (200252)
FR 2821556 A1 20020906 (200266)
EP 1317281 A1 20030611 (200339) FR
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
US 2004058861 A1 20040325 (200422)
ADT WO 2002020052 A1 WO 2001-FR2773 20010906; AU 2001087820 A AU 2001-87820 20010906; FR 2813793 A1 FR 2000-11443 20000908; FR 2821556 A1 FR 2001-2846 20010302; EP 1317281 A1 EP 2001-967441 20010906, WO 2001-FR2773 20010906; US 2004058861 A1 Provisional US 2000-235079P 20000925, Provisional US 2001-278942P 20010327, US 2001-948965 20010907
FDT AU 2001087820 A Based on WO 2002020052; EP 1317281 A1 Based on WO 2002020052
PRAI US 2001-278942P 20010327; FR 2000-11443 20000908;
US 2000-235079P 20000925; FR 2001-2846 20010302
AB WO 200220052 A UPAB: 20020815
NOVELTY - The use of lipopeptides (I) is claimed in the preparation of a vaccine for controlling viral rebound after cessation of antiretroviral therapy in **HIV**-positive patients having a viral charge of at most 10000 (especially at most 50) copies per ml of plasma and a CD4+ level of at least 300 (preferably at least 500) cells per mm3, where (I) consists of a 7-100 amino acid chain containing at least one CTL epitope of an **HIV** protein, covalently bonded to an 8-20C lipid chain.

ACTIVITY - Anti-**HIV**.

MECHANISM OF ACTION - Vaccine.

USE - (I) induce specific CD4+ and CD8+ cellular responses after cessation of administration of anti-retroviral drugs to **HIV**-positive patients (including AIDS patients, and newly or chronically affected patients), to keep the **HIV** viral charge low and prevent viral rebound. Anti-retroviral therapy can thus be interrupted (to alleviate side-effects, reduce the possibility of development of resistant strains and/or improve patient compliance) without causing relapse. Typically 1 ml of a composition containing 3 mg of six lipopeptides (i.e. Nef 66-97, Nef 116-145, Gad 17-35, Gag 253-284 and Pol 325-355, having an added lysine residue at the C-terminal and a palmitic acid residue amide-bonded to the side chain of the lysine; plus the TT 830-846 epitope of tetanus toxin as universal T-helper epitope) was administered intramuscularly 4 times (at monthly intervals) to newly or chronically infected **HIV**-positive patients having a viral charge of at most 1000 copies per ml of plasma and a CD4+ level of at least 300 cells per mm3, simultaneously with intramuscular administration of ALVAC-**HIV** (vCP1433) at 106.5 TCID50. Anti-retroviral therapy was ceased 4 weeks after the last injection. Viremia was at least temporarily controlled, as shown by determination of the viral charge (no quantitative results given in the source material).
Dwg.0/1

=> file medline

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	110.00	273.53

FILE 'MEDLINE' ENTERED AT 16:19:14 ON 06 SEP 2005

FILE LAST UPDATED: 3 SEP 2005 (20050903/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow promt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> e sia c d y/au
E1          18     SIA C/AU
E2          14     SIA C C/AU
E3           0 --> SIA C D Y/AU
E4          17     SIA C G/AU
E5           8     SIA C L/AU
E6           9     SIA CALVIN/AU
E7           2     SIA CALVIN C J/AU
E8           1     SIA CHARLES/AU
E9           1     SIA CONCEPCION/AU
E10         19     SIA D Y/AU
E11          7     SIA E A/AU
E12          1     SIA E O/AU

=> s e1 or e8
            18 "SIA C"/AU
             1 "SIA CHARLES"/AU
L9          19 "SIA C"/AU OR "SIA CHARLES"/AU

=> d l9,ti,1-19

L9   ANSWER 1 OF 19     MEDLINE on STN
TI   SARS antibody test for serosurveillance.

L9   ANSWER 2 OF 19     MEDLINE on STN
TI   Hawaii's healthy start program of home visiting for at-risk families:
     evaluation of family identification, family engagement, and service
     delivery.

L9   ANSWER 3 OF 19     MEDLINE on STN
TI   Newborn and infant hearing loss: detection and intervention.American
     Academy of Pediatrics. Task Force on Newborn and Infant Hearing, 1998-
     1999.

L9   ANSWER 4 OF 19     MEDLINE on STN
TI   Peptide secondary structure mimetics: applications to vaccines and
     pharmaceuticals.

L9   ANSWER 5 OF 19     MEDLINE on STN
TI   Sculpted immunogens; B-cell epitope optimization using constrained
     secondary structure libraries.

L9   ANSWER 6 OF 19     MEDLINE on STN
TI   Induction of HIV type 1 neutralizing and env-CD4 blocking antibodies by
     immunization with genetically engineered HIV type 1-like particles
     containing unprocessed gp160 glycoproteins.

L9   ANSWER 7 OF 19     MEDLINE on STN
TI   CD14-independent responses to LPS require a serum factor that is absent
     from neonates.

L9   ANSWER 8 OF 19     MEDLINE on STN
TI   Immunogenicity of synthetic peptides of Haemophilus influenzae type b
     outer membrane protein P1.

L9   ANSWER 9 OF 19     MEDLINE on STN
TI   Immunogenicity of overlapping synthetic peptides covering the entire
     sequence of Haemophilus influenzae type b outer membrane protein P2.
```

L9 ANSWER 10 OF 19 MEDLINE on STN
TI Synthesis and immunological characterization of a 134-mer synthetic peptide corresponding to the N-terminal half of the HIV-1 nucleoprotein, p24.

L9 ANSWER 11 OF 19 MEDLINE on STN
TI Identification of T- and B-cell epitopes of the S2 and S3 subunits of pertussis toxin by use of synthetic peptides.

L9 ANSWER 12 OF 19 MEDLINE on STN
TI Expression and characterization of genetically engineered human immunodeficiency virus-like particles containing modified envelope glycoproteins: implications for development of a cross-protective AIDS vaccine.

L9 ANSWER 13 OF 19 MEDLINE on STN
TI Production of immunogenic HIV-1 viruslike particles in stably engineered monkey cell lines.

L9 ANSWER 14 OF 19 MEDLINE on STN
TI Identification of a potent synthetic HIV1 immunogen compromising gag-P24 tandem T- and B-cell epitopes.

L9 ANSWER 15 OF 19 MEDLINE on STN
TI Ethnic heterogeneity in the distribution of the OKT4 antigen on lymphocytes: studies in three black families.

L9 ANSWER 16 OF 19 MEDLINE on STN
TI T lymphocyte subpopulations in high-risk infants: influence of age and blood transfusions.

L9 ANSWER 17 OF 19 MEDLINE on STN
TI Observations on unrestricted parental contact with infants in the neonatal intensive care unit.

L9 ANSWER 18 OF 19 MEDLINE on STN
TI Editorial: The hazards of skateboard-riding.

L9 ANSWER 19 OF 19 MEDLINE on STN
TI Inguinal hernia: a common problem of premature infants weighing 1,000 grams or less at birth.

=> d his

(FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
E SIA CHARLES/IN
L1 16 S E3-E5
E KLEIN MICHEL/IN
L2 177 S E3-E5
L3 47 S L2 AND (T-HELPER)
L4 2 S L3 AND (T-HELPER/CLM)

FILE 'WPIDS' ENTERED AT 16:13:39 ON 06 SEP 2005
E SIA CHARLES/IN
E SIA C D Y/IN
L5 19 S E1 OR E3
E KLEIN M/IN
L6 264 S E3
L7 4 S L6 AND (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L8 4 S L7 NOT L5

FILE 'MEDLINE' ENTERED AT 16:19:14 ON 06 SEP 2005
E SIA C D Y/AU
L9 19 S E1 OR E8

=> file uspatful
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.76	274.29

FILE 'USPATFULL' ENTERED AT 16:20:38 ON 06 SEP 2005
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 6 Sep 2005 (20050906/PD)
FILE LAST UPDATED: 6 Sep 2005 (20050906/ED)

HIGHEST GRANTED PATENT NUMBER: US6941576
HIGHEST APPLICATION PUBLICATION NUMBER: US2005193458
CA INDEXING IS CURRENT THROUGH 6 Sep 2005 (20050906/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 6 Sep 2005 (20050906/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
>>> original, i.e., the earliest published granted patents or <<<
>>> applications. USPAT2 contains full text of the latest US <<<
>>> publications, starting in 2001, for the inventions covered in <<<
>>> USPATFULL. A USPATFULL record contains not only the original <<<
>>> published document but also a list of any subsequent <<<
>>> publications. The publication number, patent kind code, and <<<
>>> publication date for all the US publications for an invention <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<
>>> records and may be searched in standard search fields, e.g., /PN, <<<
>>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<
>>> enter this cluster. <<<
>>> <<<
>>> Use USPATALL when searching terms such as patent assignees, <<<
>>> classifications, or claims, that may potentially change from <<<
>>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

```
=> s (hiv or human immunodeficiency virus)
         38892 HIV
        460771 HUMAN
         22196 IMMUNODEFICIENCY
         91252 VIRUS
         15855 HUMAN IMMUNODEFICIENCY VIRUS
                 (HUMAN(W)IMMUNODEFICIENCY(W)VIRUS)
L10      40963 (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)

=> s l10 and (T-helper or CD4?)
       1068740 T
         23655 HELPER
          5269 T-HELPER
                 (T(W)HELPER)
         25224 CD4?
L11      13497 L10 AND (T-HELPER OR CD4?)

=> s l11 and (T-helper)
       1068740 T
         23655 HELPER
          5269 T-HELPER
                 (T(W)HELPER)
L12       3031 L11 AND (T-HELPER)

=> s l12 and ay<2000
       3003849 AY<2000
L13        943 L12 AND AY<2000

=> s l13 and (T-helper/clm)
        128714 T/CLM
          1473 HELPER/CLM
           248 T-HELPER/CLM
                 ((T(W)HELPER)/CLM)
L14         45 L13 AND (T-HELPER/CLM)

=> d l14,ti,1-45

L14  ANSWER 1 OF 45  USPATFULL on STN
TI     Methods of inhibiting production of T helper type 2 cytokines in
       human immune cells

L14  ANSWER 2 OF 45  USPATFULL on STN
TI     Artificial T helper cell epitopes as immune stimulators for
       synthetic peptide immunogens

L14  ANSWER 3 OF 45  USPATFULL on STN
TI     Inducing cellular immune responses to hepatitis B virus using peptide
       and nucleic acid compositions
```

L14 ANSWER 4 OF 45 USPATFULL on STN
TI Generation of antigen specific T suppressor cells for treatment of rejection

L14 ANSWER 5 OF 45 USPATFULL on STN
TI Expression of **HIV** polypeptides and production of virus-like particles

L14 ANSWER 6 OF 45 USPATFULL on STN
TI Hybrid genes for expression of stimulatory factors in activated T cells

L14 ANSWER 7 OF 45 USPATFULL on STN
TI Use of immunopotentiating sequences for inducing immune response

L14 ANSWER 8 OF 45 USPATFULL on STN
TI IN VIVO ACTIVATION OF TUMOR-SPECIFIC CYTOTOXIC T CELLS

L14 ANSWER 9 OF 45 USPATFULL on STN
TI Methods for regulating T cell subsets by modulating transcription factor activity

L14 ANSWER 10 OF 45 USPATFULL on STN
TI IN VIVO ACTIVATION OF TUMOR-SPECIFIC CYTOTOXIC T CELLS

L14 ANSWER 11 OF 45 USPATFULL on STN
TI Processed polypeptides with IL-16 activity, process for preparing the same and their use

L14 ANSWER 12 OF 45 USPATFULL on STN
TI Recombinant VP2 parvoviral pseudo-particles encoding CTL or **T-helper** cell epitopes

L14 ANSWER 13 OF 45 USPATFULL on STN
TI IMPROVEMENTS IN OR RELATING TO PEPTIDE DELIVERY

L14 ANSWER 14 OF 45 USPATFULL on STN
TI Induction of immune response against desired determinants

L14 ANSWER 15 OF 45 USPATFULL on STN
TI Use of the IL-4 receptor for the therapy prophylaxis and diagnosis of allergic viral parasitic and bacterial diseases and of fungal infections

L14 ANSWER 16 OF 45 USPATFULL on STN
TI Rapid release encapsulated bioactive agents for inducing or potentiating an immune response and methods of using thereof

L14 ANSWER 17 OF 45 USPATFULL on STN
TI **HIV**-SPECIFIC CYTOTOXIC T-CELL RESPONSES

L14 ANSWER 18 OF 45 USPATFULL on STN
TI GENETIC VACCINE VECTOR ENGINEERING

L14 ANSWER 19 OF 45 USPATFULL on STN
TI Peptides for inducing cytotoxic T lymphocyte responses to hepatitis B virus

L14 ANSWER 20 OF 45 USPATFULL on STN
TI Methods and compositions for the priming of specific cytotoxic T-lymphocyte response

L14 ANSWER 21 OF 45 USPATFULL on STN
TI IL-4 receptor for the therapy, prophylaxis and diagnosis of allergic, viral, and bacterial diseases and of fungal infections

L14 ANSWER 22 OF 45 USPATFULL on STN
TI Compositions and methods for the treatment and diagnosis of immune disorders

L14 ANSWER 23 OF 45 USPATFULL on STN
TI Rath genes and polypeptides and methods for the treatment and diagnosis of immune disorders

L14 ANSWER 24 OF 45 USPATFULL on STN
TI Device and process for cell capture and recovery

L14 ANSWER 25 OF 45 USPATFULL on STN
TI Rath genes and polypeptides and methods for the treatment and diagnosis of immune disorders

L14 ANSWER 26 OF 45 USPATFULL on STN

TI Human transaldolase: an autoantigen with a function in metabolism

L14 ANSWER 27 OF 45 USPATFULL on STN
TI Synthetic vaccine for protection against **human immunodeficiency virus** infection

L14 ANSWER 28 OF 45 USPATFULL on STN
TI Human transaldolase: an autoantigen with a function in metabolism

L14 ANSWER 29 OF 45 USPATFULL on STN
TI Hybrid genes for use in the production of T_H -independent cytotoxic T cells

L14 ANSWER 30 OF 45 USPATFULL on STN
TI Peptides for inducing cytotoxic T lymphocyte responses to hepatitis B virus

L14 ANSWER 31 OF 45 USPATFULL on STN
TI Peptides for inducing cytotoxic T lymphocyte responses hepatitis B virus

L14 ANSWER 32 OF 45 USPATFULL on STN
TI Recombinant attenuated ALVAC canarypoxvirus expression vectors containing heterologous DNA segments encoding lentiviral gene products

L14 ANSWER 33 OF 45 USPATFULL on STN
TI Alteration of immune response using pan DR-binding peptides

L14 ANSWER 34 OF 45 USPATFULL on STN
TI Method for making a medicament for treating secondary immunodeficiency

L14 ANSWER 35 OF 45 USPATFULL on STN
TI Method for detecting immune dysfunction in asymptomatic aids patients and for predicting organ transplant rejection

L14 ANSWER 36 OF 45 USPATFULL on STN
TI Recombinant mutants for inducing specific immune responses

L14 ANSWER 37 OF 45 USPATFULL on STN
TI Method for producing T_H -independent cytotoxic T lymphocytes

L14 ANSWER 38 OF 45 USPATFULL on STN
TI Liposomes that provide thymic dependent help to weak vaccine antigens

L14 ANSWER 39 OF 45 USPATFULL on STN
TI Method for detecting immune system dysfunction in asymptomatic, **HIV**-scropositive individuals

L14 ANSWER 40 OF 45 USPATFULL on STN
TI T-cell suppressor protein

L14 ANSWER 41 OF 45 USPATFULL on STN
TI Method of staining monocytes and compositions thereof

L14 ANSWER 42 OF 45 USPATFULL on STN
TI Method of showing progression of AIDS in an ARC patient by treating with Tyr-Gly compositions

L14 ANSWER 43 OF 45 USPATFULL on STN
TI Modulation of aids virus-related events by double-stranded RNAs

L14 ANSWER 44 OF 45 USPATFULL on STN
TI Method of treating human illnesses which compromise the ability to mount an effective immunological response

L14 ANSWER 45 OF 45 USPATFULL on STN
TI Modulation of AIDS virus-related events by double-stranded RNAS

=> d l14,cbib,clm,1,2,7,17,27,30

L14 ANSWER 1 OF 45 USPATFULL on STN
2005:6880 Methods of inhibiting production of **T helper** type 2 cytokines in human immune cells.
Harn, Donald A., Pembroke, MA, United States
Velupillai, Palanivel, Boston, MA, United States
President and Fellows of Harvard College, Cambridge, MA, United States (U.S. corporation)
US 6841543 B1 20050111
APPLICATION: US 1996-597518 19960131 (8) <--

DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A method of inhibiting the production of a **T helper** type 2 (Th2) cytokine in a human immune cell that is capable of producing a Th2 cytokine, the method comprising contacting a human immune cell with a sufficient amount of a pharmaceutical composition consisting essentially of non-crosslinked, monovalent Lewis^x antigen consisting of LNFP-III such that production by the human immune cell of at least one Th2 cytokine is inhibited.

2. The method of claim 1, wherein production of IL-10 by the human immune cell is inhibited.

3. The method of claim 1, wherein the pharmaceutical composition is administered to a human subject such that production by human immune cells of the human subject of at least on Th2 cytokine is inhibited.

4. The method of claim 1, wherein the human immune cell is a T cell.

5. The method of claim 1, wherein the human immune cell is a macrophage.

6. The method of claim 1, wherein the human immune cell is a B cell.

7. A method of inhibiting the production of a **T helper** type 2 (Th2) cytokine in a human macrophage, the method comprising contacting a macrophage with a sufficient amount of a pharmaceutical composition consisting essentially of non-crosslinked, monovalent Lewis^x antigen consisting of LNFP-III such that production by the macrophage of at least one Th2 cytokine is inhibited.

8. The method of claim 7, wherein production of IL-10 by the macrophage is inhibited.

9. The method of claim 7, wherein the pharmaceutical composition is administered to a human subject such that production by macrophages of the human subject of at least one Th2 cytokine is inhibited.

10. A method of inhibiting the production of a **T helper** type 2 (Th2) cytokine in a T cell, the method comprising contacting a human T cell with a sufficient amount of a pharmaceutical composition consisting essentially of non-crosslinked, monovalent Lewis^x antigen consisting of LNFP-III such that production by the T cell of at least on Th2 cytokine is inhibited.

11. The method of claim 10, wherein production of IL-10 by the T cell is inhibited.

12. The method of claim 10, wherein the pharmaceutical composition is administered to a human subject such that production by T cells of the human subject of at least one Th2 cytokine is inhibited.

13. The method of claim 3, 9 or 12, wherein the human subject is a cancer patient.

14. The method of claim 3, 9 or 12, wherein the human subject has an infectious disease.

15. The method of claim 3, 9 or 12, wherein the human subject has an allergic condition.

L14 ANSWER 2 OF 45 USPATFULL on STN
2004:78918 Artificial **T helper** cell epitopes as immune stimulators for synthetic peptide immunogens.
Wang, Chang Yi, Cold Spring Harbor, NY, United States
United Biomedical, Inc., Hauppauge, NY, United States (U.S. corporation)
US 6713301 B1 20040330
WO 9966957 19991229
APPLICATION: US 2000-701588 20001129 (9) <--
WO 1999-US13975 19990621
DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A **T helper** cell epitope selected from the group consisting of SEQ ID NO: 6-22, 105, 123, 124, and 31-35.

2. A **T helper** cell epitope according to claim 1 for preparing a peptide immunogen represented by the formula $(A)_n$-(Targent

antigentic site)-$(B)_o$-$(Th)_{m-X}$ or $(A)_n$-$(Th)_m$-$(B)_o$-(Target antigenic site)-X or $(A)_n$-$(B)_o(Th)_m$-$(B)_o$-(Target antigenic site)-X or Targent antigenic site)-$(B)_o$-$(Th)_m$-$(A)_{n-X}$ or $(Th)_m$-$(B)_o$-(Target antigenic site)-$(A)_{n-X}$ wherein A is an amino acid or a general immunostimulatory sequence, where n is more than one, the interval A's may be the same or different; B selected from the group consisting of amino acids, --HCH(X)$CH_{2SCH2CO}$--, NHCH(X)$CH_{2SCH2CO}$(--N)Lys--, --NHCH(X)$CH_{2S\text{-}succinimidyl}$(.quadrature.-N)Lys, and NHCH(X)CH_{2S}-(succinimidyl); Th is an artificial helper T cell epitope selected from the group of SEQ ID NOS:6-22, 105, 31-35 and an analog thereof: "Target antigenic site" is selected from the group consisting of a B cell epitope, a peptide hapten, and a immunologically reactive anaolog thereof; X is amino acid α-COOH or $CONH_2$, n is from 1 to about 10; m is from 1 to about 4; and o is from 0 to about 10.

3. A peptide immunogen according to claim 2 wherein the immunostimulatory sequence is SEQ ID NO:78.

4. A peptide immunogen according to claim 2 wherein B is selected from the group consisting of Gly--Gly, (.quadrature.-N)Lys, Pro-Pro-Xaa-Pro-Pro, --NHCH(X)$CH_{2SCH2CO}$--, --NHCH(X)$CH_{2SCH2CO}$ (.quadrature.-N)Lys-, --NHCH(X)CH_{2S}-succinimidyl (.quadrature.-N)Lys-, and --NHCH(X)CH_{2S}-(succinimidly)-.

5. A peptide immunogen according to claim 4 wherein B is Gly--Gly.

6. A peptide immunogen according to claim 4 wherein B is (.quadrature.-N)Lys.

7. A peptide immunogen according to claim 1, 2, 3, 4, 5, or 6 wherein the the Target Antigen Site is the Plasmodium falciparum repeating antigen: $(Asn\text{-}Ala\text{-}Asn\text{-}Pro)_p$ (SEQ ID NO:103).

8. A peptide immunogen according to claim 7 wherein p=4.

9. A peptide immunogen according to claim 7 selected from the group consisting of SEQ ID NOs: 104, and 105.

10. A peptide immunogen according to claim 1, 2, 3, 4, 5, or 6 wherein the the Target Antigen site is selected from the group consisting of SEQ ID NO: 106, 107, 108, and 109, an epitope of CETP.

11. A peptide immunogen according to claim 10 selected from the group consisting of SEQ ID NOs:110-118, and 119.

12. A peptide immunogen according to claim 1, 2, 3, 4, 5, or 6 wherein the the Target Antigen site is selected from the group consisting of SEQ ID NOS: 125, 131, 132, 133, 134, and 135, and epitope of **HIV**.

13. A peptide immunogen according to claim 12 selected from the group consisting of SEQ ID NOs:126-129, and 136-151.

14. A peptide immunogen according to claim 13 selected from the group consisting of SEQ ID NOs:148-150, and 151.

15. A method for producing a peptide immunogen by covalently linking a **T helper** cell epitope to a target antigenic site selected from the group consisting of B cell epitopes of an antigen and a peptide hapten.

16. A method for producing a peptide immunogen according to claim 15 further linking the covalently linked **T helper** cell epitope and target antigenic site to an immunostimulatory sequence.

17. A method for producing a peptide immunogen according to claim 16 wherein the immunostimulatory sequence is SEQ ID NO:78.

18. A method for producing a peptide immunogen according to claim 17 wherein B is selected from the group consisting of Gly--Gly, (Δ-N)Lys, Pro-Pro-Xaa-Pro-Pro, --NHCH(X)$CH_{2SCH2CO}$--, --NHCH(X)$CH_{2SCH2CO}$ (.quadrature.-N)Lys-, --NHCH(X)CH_{2S}-succinimidyl (.quadrature.-N)Lys-, and --NHCH(X)$CH_{2S\text{-}succinimidyl}$)-.

19. A method for producing a peptide immunogen according to claim 18 wherein B is Gly--Gly.

20. A method for producing a peptide immunogen according to claim 19 wherein B is (.quadrature.-N)Lys.

21. A method of inducing **T helper** cell response by employing a peptide immunogen of claim 1.

22. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 2.

23. A method of inducing **T helper** cell response to employing a peptide immunogen of of claim 3.

24. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 4.

25. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 5.

26. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 6.

27. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 7.

28. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 8.

29. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 9.

30. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 10.

31. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 11.

32. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 12.

33. A method of inducing **T helper** cell response by employing a peptide immunogen of of claim 13.

L14 ANSWER 7 OF 45 USPATFULL on STN
2003:129925 Use of immunopotentiating sequences for inducing immune response.
McMillan, Minnie, Bradbury, CA, United States
University of Southern California, Los Angeles, CA, United States (U.S. corporation)
US 6562800 B1 20030513
APPLICATION: US 1999-430470 19991029 (9) <--
PRIORITY: US 1998-106506P 19981030 (60)
DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A DNA expression vector for inducing an immune response comprising: a first DNA sequence encoding an immunopotentiating chemokine fragment comprising the sequence of SEQ ID NO:22, said fragment having a length that is not more than 10% of the source immunopotentiating chemokine; and a second DNA sequence encoding a heterologous immunogenic polypeptide.

2. The DNA expression vector of claim 1 wherein the immunopotentiating chemokine fragment is a chemokine fragment that attracts T cells.

3. The DNA expression vector of claim 1 wherein the immunopotentiating chemokine fragment is a chemokine fragment that attracts cells of the monocyte lineage.

4. The DNA expression vector of claim 1 wherein the immunopotentiating chemokine fragment is a chemokine fragment that attracts B cells.

5. The DNA expression vector of claim 1 wherein the DNA expression vector further comprises a third DNA sequence encoding a hydrophobic leader signalling motif that directs the import of the immunogenic polypeptide into the endoplasmic reticulum of an antigen presenting cell.

6. The DNA expression vector of claim 5 wherein the DNA expression

vector further comprises a fourth DNA sequence encoding a signalling motif for retaining the immunogenic polypeptide within the endoplasmic reticulum of an antigen presenting cell.

7. The DNA expression vector of claim 6 wherein the DNA expression vector further comprises a fifth DNA sequence encoding a signalling motif for sending the immunogenic polypeptide into the MHC Class II pathways of an antigen presenting cell.

8. The DNA expression vector of claim 1 wherein the immunogenic polypeptide is the gp120 IIIB coat protein of the **HIV** virus.

9. The DNA expression vector of claim 1 wherein the immunogenic polypeptide is the AG85A protein from the Mycobacterium tuberculosis.

10. The DNA expression vector of claim 1 wherein the DNA expression vector is selected from the group consisting of plasmids, adenovirus vectors, poxivirus vectors, adenoassociated virus vectors, and retrovirus vectors.

11. The DNA expression vector of claim 10 wherein the vector comprises the sequence of SEQ ID NO:1 or SEQ ID NO:3.

12. The DNA expression vector of claim 1 wherein the immunogenic polypeptide is a cytotoxic T lymphocyte epitope.

13. The DNA expression vector of claim 1 wherein the immunogenic polypeptide is a B cell epitope.

14. The DNA expression vector of claim 12 further comprising a sequence encoding a **T helper** cell epitope.

15. The DNA expression vector of claim 13 further comprising a sequence encoding a **T helper** cell epitope.

16. A composition for inducing an immune response comprising: an effective amount of the DNA expression vector of claim 1 and a carrier.

17. A method of manufacturing a composition for inducing an immune response comprising: combining an effective amount of the DNA expression vector of claim 1 and a carrier.

L14 ANSWER 17 OF 45 USPATFULL on STN
2001:150268 **HIV**-SPECIFIC CYTOTOXIC T-CELL RESPONSES.
SIA, CHARLES D. Y., THORNHILL, Canada
CHONG, PELE, RICHMOND HILL, Canada
KLEIN, MICHEL H., WILLOWDALE, Canada
US 2001019714 A1 20010906
APPLICATION: US 1998-55744 A1 19980407 (9) <--
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A method of generating an **HIV**-specific cytotoxic T-cell (CTL) response in a host, which comprises: administering to the host a **T-helper** molecule to prime **T-helper** cells of the immune system of the host, and subsequently administering to the host a mixture of said **T-helper** molecule and a T-cell inducing **HIV**-derived molecule to generate an **HIV**-specific T-cell response in the host.

2. The method of claim 1 wherein said **T-helper** molecule is selected from HLA class II restricted **T-helper** epitopes.

3. The method of claim 2 wherein said **T-helper** epitopes are selected from the group consisting of DP, DR and DQ-specific T-cell epitopes.

4. The method of claim 2 wherein said **T-helper** molecule is CLP-243 (SEQ ID NO:10).

5. The method of claim 1 wherein said **T-helper** molecule is administered with an adjuvant.

6. The method of claim 1 wherein said T-cell inducing **HIV**-derived molecule includes a peptide corresponding to a portion of an **HIV**-1 antigen and containing at least one T-cell epitope.

7. The method of claim 5 wherein said peptide correspond to sequences of the Rev protein of **HIV**-1.

8. The method of claim 6 wherein said peptide is a lipopeptide.

9. The method of claim 8 wherein the lipid is palmitoyl or cholesterol.

10. The method of claim 7 wherein said lipopeptide is CLP-175 or CLP-176.

11. The method of claim 6 wherein said mixture is administered with an adjuvant.

12. A peptide having an amino acid corresponding to amino acids 52 to 116 (SEQ ID No:9) of the sequence of the Rev protein of **HIV**-1 LAI isolate and containing T-cell epitopes within amino acids 63 to 73 (SEQ ID NO:3), 74 to 83 (SEQ ID NO:5) and 102 to 110 (SEQ ID NO:8), or having a corresponding amino acid sequence from another **HIV**-I isolate.

13. The peptide of claim 12 in the form of a lipopeptide.

14. The peptide of claim 13 wherein the lipid is palmitoyl or cholesterol.

15. The peptide of claim 13 wherein the lipopeptide is CLP-175 or CLP-176.

L14 ANSWER 27 OF 45 USPATFULL on STN
1999:155203 Synthetic vaccine for protection against **human immunodeficiency virus** infection.
Haynes, Barton F., Durham, NC, United States
Palker, Thomas J., Durham, NC, United States
Duke University, Durham, NC, United States (U.S. corporation)
US 5993819 19991130
APPLICATION: US 1995-546515 19951020 (8) <--
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed:
1. A peptide of the general formula Th-SP10(X) wherein: Th represents an amino acid sequence comprising a **T helper** epitope; SP10 represents a peptide consisting essentially of an amino acid sequence of up to about 35 units in length and corresponding to at least one antigenic determinant of the envelope glycoprotein of **HIV** recognized by B lymphocytes, said peptide being capable, when covalently linked to a carrier molecule, of inducing in a mammal the production of high titers of type-specific antibodies against **HIV**; and (X) represents an amino acid sequence corresponding to a **HIV** protein sequence recognized by MHC Class I or Class II restricted cytotoxic T cells.

2. A peptide of the general formula: Th-SP10 wherein: Th represents an amino acid sequence comprising a **T helper** epitope; and SP10 represents a peptide consisting essentially of an amino acid sequence of up to about 35 units in length and corresponding to at least one antigenic determinant of the envelope glycoprotein of **HIV** recognized by B lymphocytes, said peptide being capable, when covalently linked to a carrier molecule, of inducing in a mammal the production of high titers of type-specific antibodies against **HIV**.

L14 ANSWER 30 OF 45 USPATFULL on STN
1998:147031 Peptides for inducing cytotoxic T lymphocyte responses to hepatitis B virus.
Chisari, Francis V., Del Mar, CA, United States
Ferrari, Carlo, Parma, Italy
Penna, Amalia, Parma, Italy
Missale, Gabriele, Parma, Italy
The Scripps Research Foundation, La Jolla, CA, United States (U.S. corporation)
US 5840303 19981124
APPLICATION: US 1995-468279 19950606 (8) <--
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed:
1. A peptide containing at least one cytotoxic T lymphocyte (CTL) epitope, the peptide comprising from eight to seventeen amino acids and including at least seven contiguous amino acids of a corresponding portion of $HBpol_{803-811}$ having the following sequence: VIII ($HBpol_{803-811}$) (Seq. ID No. 10) Ser-Leu-Tyr-Ala-Asp-Ser-Pro-Ser-Val.

2. The peptide of claim 1, which is VIII ($HBpol_{803-811}$) [Seq. ID

No. 10]Ser-Leu-Tyr-Ala-Asp-Ser-Pro-Ser-Val.

3. An immunogenic polypeptide composition comprising the peptide of claim 1 joined to and a second immunogenic peptide to form a heteropolymer.

4. The immunogenic polypeptide composition of claim 3, wherein the second immunogenic peptide elicits a immune response specific for hepatitis B virus.

5. The immunogenic polypeptide composition of claim 4, wherein the second immunogenic peptide elicits a **T-helper** cell mediated response.

6. An immunogenic conjugate composition comprising the peptide of claim 1 conjugated to a immunogenic lipid carrier.

7. The immunogenic conjugate composition of claim 6, wherein the lipid carrier enhances a human T-lymphocyte response.

8. The immunogenic conjugate composition of claim 7, wherein the lipid carrier is a lipopeptide.

9. A peptide according to claim 1 which is expressed by a DNA construct that comprises a transcriptional promotor, a DNA sequence encoding said peptide, and a transcription terminator, each operably linked for expression of said peptide.

10. The peptide according to claim 1 comprising from eight to twelve amino acid residues.

11. The peptide according to claim 10 comprising nine or ten amino acid residues.

12. The peptide according to claim 11, which is ($HBpol_{803-811}$) [Seq. ID No. 10]Ser-Leu-Tyr-Ala-Asp-Ser-Pro-Ser-Val.

```
=> d his

     (FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

     FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
                E SIA CHARLES/IN
L1           16 S E3-E5
                E KLEIN MICHEL/IN
L2          177 S E3-E5
L3           47 S L2 AND (T-HELPER)
L4            2 S L3 AND (T-HELPER/CLM)

     FILE 'WPIDS' ENTERED AT 16:13:39 ON 06 SEP 2005
                E SIA CHARLES/IN
                E SIA C D Y/IN
L5           19 S E1 OR E3
                E KLEIN M/IN
L6          264 S E3
L7            4 S L6 AND (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L8            4 S L7 NOT L5

     FILE 'MEDLINE' ENTERED AT 16:19:14 ON 06 SEP 2005
                E SIA C D Y/AU
L9           19 S E1 OR E8

     FILE 'USPATFULL' ENTERED AT 16:20:38 ON 06 SEP 2005
L10       40963 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L11       13497 S L10 AND (T-HELPER OR CD4?)
L12        3031 S L11 AND (T-HELPER)
L13         943 S L12 AND AY<2000
L14          45 S L13 AND (T-HELPER/CLM)

=> s l10 and Rev
          85691 REV
L15       18902 L10 AND REV

=> s l15 and (CTL or CTL epitope?)
          10404 CTL
          10404 CTL
          43676 EPITOPE?
            885 CTL EPITOPE?
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                (CTL(W)EPITOPE?)
L16        2167 L15 AND (CTL OR CTL EPITOPE?)

=> s l16 and (epitope?)
          43676 EPITOPE?
L17        1836 L16 AND (EPITOPE?)

=> s l17 and (CTL/clm or cytotoxic/clm)
           424 CTL/CLM
          3396 CYTOTOXIC/CLM
L18         352 L17 AND (CTL/CLM OR CYTOTOXIC/CLM)

=> s l18 and ay<2000
        3003849 AY<2000
L19           84 L18 AND AY<2000

=> d l19,ti,1-84

L19  ANSWER 1 OF 84  USPATFULL on STN
TI     Nucleic acid constructs

L19  ANSWER 2 OF 84  USPATFULL on STN
TI     Methods for using dendritic cells to activate gamma/delta-T cell
       receptor-positive T cells

L19  ANSWER 3 OF 84  USPATFULL on STN
TI     Purification of heat shock/stress protein cell surface receptors and
       their use as immunotherapeutic agents

L19  ANSWER 4 OF 84  USPATFULL on STN
TI     Immunodominant human T-cell epitopes of hepatitis C virus

L19  ANSWER 5 OF 84  USPATFULL on STN
TI     β2 microglobulin fusion proteins and high affinity variants

L19  ANSWER 6 OF 84  USPATFULL on STN
TI     REDIRECTION OF CELLULAR IMMUNITY BY RECEPTOR CHIMERAS

L19  ANSWER 7 OF 84  USPATFULL on STN
TI     HIV-specific T-cell induction

L19  ANSWER 8 OF 84  USPATFULL on STN
TI     MULTIPLE ANTIGEN GLYCOPEPTIDE CARBOHYDRATE VACCINE COMPRISING THE SAME
       AND USE THEREOF

L19  ANSWER 9 OF 84  USPATFULL on STN
TI     HLA BINDING PEPTIDES AND THEIR USES

L19  ANSWER 10 OF 84  USPATFULL on STN
TI     Expression of HIV polypeptides and production of virus-like particles

L19  ANSWER 11 OF 84  USPATFULL on STN
TI     Targeting antigens to the MHC class I processing pathway with an anthrax
       toxin fusion protein

L19  ANSWER 12 OF 84  USPATFULL on STN
TI     Use of immunopotentiating sequences for inducing immune response

L19  ANSWER 13 OF 84  USPATFULL on STN
TI     IN VIVO ACTIVATION OF TUMOR-SPECIFIC CYTOTOXIC T CELLS

L19  ANSWER 14 OF 84  USPATFULL on STN
TI     SYNTHETIC HEPATITIS C GENES

L19  ANSWER 15 OF 84  USPATFULL on STN
TI     Expression vectors for stimulating an immune response and methods of
       using the same

L19  ANSWER 16 OF 84  USPATFULL on STN
TI     Vaccines comprising synthetic genes

L19  ANSWER 17 OF 84  USPATFULL on STN
TI     IN VIVO ACTIVATION OF TUMOR-SPECIFIC CYTOTOXIC T CELLS

L19  ANSWER 18 OF 84  USPATFULL on STN
TI     Chimeric gene constructs

L19  ANSWER 19 OF 84  USPATFULL on STN
TI     Selective elimination of T cells that recognize specific preselected
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targets

L19 ANSWER 20 OF 84 USPATFULL on STN
TI AUTOLOGOUS IMMUNE CELL THERAPY: CELL COMPOSITIONS, METHODS AND APPLICATIONS TO TREATMENT OF HUMAN DISEASE

L19 ANSWER 21 OF 84 USPATFULL on STN
TI HLA BINDING PEPTIDES AND THEIR USES

L19 ANSWER 22 OF 84 USPATFULL on STN
TI CHIMERIC RECEPTOR GENES AND CELLS TRANSFORMED THEREWITH

L19 ANSWER 23 OF 84 USPATFULL on STN
TI Methods of use of viral vectors to deliver antigen to dendritic cells

L19 ANSWER 24 OF 84 USPATFULL on STN
TI HLA BINDING PEPTIDES AND THEIR USES

L19 ANSWER 25 OF 84 USPATFULL on STN
TI Compositions and methods for eliciting **CTL** immunity

L19 ANSWER 26 OF 84 USPATFULL on STN
TI IMMUNOTHERAPY USING CYTOTOXIC T LYMPHOCYTES (**CTL**)

L19 ANSWER 27 OF 84 USPATFULL on STN
TI Induction of immune response against desired determinants

L19 ANSWER 28 OF 84 USPATFULL on STN
TI NON-IMMUNOGENIC PRODRUGS AND SELECTABLE MARKERS FOR USE IN GENE THERAPY

L19 ANSWER 29 OF 84 USPATFULL on STN
TI Redirection of cellular immunity by protein-tyrosine kinase chimeras

L19 ANSWER 30 OF 84 USPATFULL on STN
TI Methods of stimulating the immune system with anti-CD3 antibodies

L19 ANSWER 31 OF 84 USPATFULL on STN
TI POLYNUCLEOTIDE TUBERCULOSIS VACCINE

L19 ANSWER 32 OF 84 USPATFULL on STN
TI Method for identifying cytotoxic T-cell **epitopes**

L19 ANSWER 33 OF 84 USPATFULL on STN
TI HIGH EFFICIENCY GENETIC MODIFICATION METHODS

L19 ANSWER 34 OF 84 USPATFULL on STN
TI Compositions and methods for inducing cytotoxic T lymphocyte responses by immunization with protein antigens

L19 ANSWER 35 OF 84 USPATFULL on STN
TI HLA-restricted hepatitis B virus **CTL epitopes**

L19 ANSWER 36 OF 84 USPATFULL on STN
TI Induction of **REV** and TAT specific cytotoxic T-cells for prevention and treatment of **human immunodeficiency virus** (**HIV**) infection

L19 ANSWER 37 OF 84 USPATFULL on STN
TI Modified rapid expansion methods ("modified-REM") for in vitro propagation of T lymphocytes

L19 ANSWER 38 OF 84 USPATFULL on STN
TI Method for obtaining expression of mixed polypeptide particles in yeast

L19 ANSWER 39 OF 84 USPATFULL on STN
TI Methods of use of viral vectors to deliver antigen to dendritic cells

L19 ANSWER 40 OF 84 USPATFULL on STN
TI Multideterminant peptides that elicit helper T-lymphocyte cytotoxic T-lymphocyte and neutralizing antibody responses against **HIV**-1

L19 ANSWER 41 OF 84 USPATFULL on STN
TI Method of eliminating inhibitory/instability regions of mRNA

L19 ANSWER 42 OF 84 USPATFULL on STN
TI **HIV**-SPECIFIC CYTOTOXIC T-CELL RESPONSES

L19 ANSWER 43 OF 84 USPATFULL on STN
TI Targeted cytolysis of **HIV**-infected cells by chimeric CD4 receptor-bearing cells

L19 ANSWER 44 OF 84 USPATFULL on STN
TI Induction of cytotoxic T-lymphocyte responses

L19 ANSWER 45 OF 84 USPATFULL on STN
TI GENETIC VACCINE VECTOR ENGINEERING

L19 ANSWER 46 OF 84 USPATFULL on STN
TI Peptides for inducing cytotoxic T lymphocyte responses to hepatitis B virus

L19 ANSWER 47 OF 84 USPATFULL on STN
TI Methods and compositions for the priming of specific cytotoxic T-lymphocyte response

L19 ANSWER 48 OF 84 USPATFULL on STN
TI Immunostimulatory composition

L19 ANSWER 49 OF 84 USPATFULL on STN
TI Induction of cytotoxic T-lymphocyte responses

L19 ANSWER 50 OF 84 USPATFULL on STN
TI Oncogene fusion protein peptide vaccines

L19 ANSWER 51 OF 84 USPATFULL on STN
TI High efficiency genetic modification method

L19 ANSWER 52 OF 84 USPATFULL on STN
TI Immunogenic compositions comprising DAL/DAT double-mutant, auxotrophic, attenuated strains of Listeria and their methods of use

L19 ANSWER 53 OF 84 USPATFULL on STN
TI Chimeric Gag pseudovirions

L19 ANSWER 54 OF 84 USPATFULL on STN
TI Selective elimination of T cells that recognize specific preselected targets

L19 ANSWER 55 OF 84 USPATFULL on STN
TI Methods for making HLA binding peptides and their uses

L19 ANSWER 56 OF 84 USPATFULL on STN
TI Induction of **REV** and TAT specific cytotoxic T-cells for prevention and treatment of **human immunodeficiency virus** (**HIV**) infection

L19 ANSWER 57 OF 84 USPATFULL on STN
TI Redirection of cellular immunity by protein tyrosine kinase chimeras

L19 ANSWER 58 OF 84 USPATFULL on STN
TI Synthetic vaccine for protection against **human immunodeficiency virus** infection

L19 ANSWER 59 OF 84 USPATFULL on STN
TI Elution and identification of T cell **epitopes** from viable cells

L19 ANSWER 60 OF 84 USPATFULL on STN
TI Identification of peptides that stimulate hepatitis C virus specific cytotoxic T cells

L19 ANSWER 61 OF 84 USPATFULL on STN
TI Potent peptide for stimulation of cytotoxic T lymphocytes specific for the **HIV**-1 envelope

L19 ANSWER 62 OF 84 USPATFULL on STN
TI Method of eliminating inhibitory/ instability regions of mRNA

L19 ANSWER 63 OF 84 USPATFULL on STN
TI Cytotoxic T lymphocyte-mediated immunotherapy

L19 ANSWER 64 OF 84 USPATFULL on STN
TI Method of determining favorable prognosis against progressing from an asymptomatic condition to AIDS in an **human immunodeficiency virus** (**HIV**) positive subject

L19 ANSWER 65 OF 84 USPATFULL on STN
TI Multideterminant peptides eliciting helper T-lymphocyte, cytotoxic T-lymphocyte, and neutralizing antibody responses against **HIV**-1

L19 ANSWER 66 OF 84 USPATFULL on STN

TI Inducing cytotoxic T lymphocyte responses

L19 ANSWER 67 OF 84 USPATFULL on STN
TI Redirection of cellular immunity by protein-tyrosine kinase chimeras

L19 ANSWER 68 OF 84 USPATFULL on STN
TI Transdermal delivery system for antigen

L19 ANSWER 69 OF 84 USPATFULL on STN
TI Method for making reflection defective retroviral vectors for infecting human cells

L19 ANSWER 70 OF 84 USPATFULL on STN
TI Peptides for inducing cytotoxic T lymphocyte responses to hepatitis B virus

L19 ANSWER 71 OF 84 USPATFULL on STN
TI Method to increase the density of antigen on antigen presenting cells

L19 ANSWER 72 OF 84 USPATFULL on STN
TI Lymphotoxin-beta and lymphotoxin-beta complexes

L19 ANSWER 73 OF 84 USPATFULL on STN
TI Alphavirus structural protein expression cassettes

L19 ANSWER 74 OF 84 USPATFULL on STN
TI Peptides for inducing cytotoxic T lymphocyte responses hepatitis B virus

L19 ANSWER 75 OF 84 USPATFULL on STN
TI Peptides capable of inducing immune response to **HIV**

L19 ANSWER 76 OF 84 USPATFULL on STN
TI Alteration of immune response using pan DR-binding peptides

L19 ANSWER 77 OF 84 USPATFULL on STN
TI Induction of cytotoxic T-lymphocyte responses

L19 ANSWER 78 OF 84 USPATFULL on STN
TI Induction of cytotoxic T-lymphocyte responses

L19 ANSWER 79 OF 84 USPATFULL on STN
TI Recombinant retroviruses expressing a protein that converts a pro-drug into a cytotoxic agent

L19 ANSWER 80 OF 84 USPATFULL on STN
TI Methods and devices for immunizing a host against tumor-associated antigens through administration of naked polynucleotides which encode tumor-associated antigenic peptides

L19 ANSWER 81 OF 84 USPATFULL on STN
TI Recombinant cytomegalovirus vaccine

L19 ANSWER 82 OF 84 USPATFULL on STN
TI Induction of cytotoxic T-lymphocyte responses

L19 ANSWER 83 OF 84 USPATFULL on STN
TI Multiple antigen peptide system having adjuvant properties, vaccines prepared therefrom and methods of use thereof

L19 ANSWER 84 OF 84 USPATFULL on STN
TI Prophylaxis and therapy of acquired immunodeficiency syndrome

=> d his

(FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
E SIA CHARLES/IN
L1 16 S E3-E5
E KLEIN MICHEL/IN
L2 177 S E3-E5
L3 47 S L2 AND (T-HELPER)
L4 2 S L3 AND (T-HELPER/CLM)

FILE 'WPIDS' ENTERED AT 16:13:39 ON 06 SEP 2005
E SIA CHARLES/IN
E SIA C D Y/IN
L5 19 S E1 OR E3

```
              E KLEIN M/IN
L6          264 S E3
L7            4 S L6 AND (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L8            4 S L7 NOT L5

     FILE 'MEDLINE' ENTERED AT 16:19:14 ON 06 SEP 2005
              E SIA C D Y/AU
L9           19 S E1 OR E8

     FILE 'USPATFULL' ENTERED AT 16:20:38 ON 06 SEP 2005
L10       40963 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L11       13497 S L10 AND (T-HELPER OR CD4?)
L12        3031 S L11 AND (T-HELPER)
L13         943 S L12 AND AY<2000
L14          45 S L13 AND (T-HELPER/CLM)
L15       18902 S L10 AND REV
L16        2167 S L15 AND (CTL OR CTL EPITOPE?)
L17        1836 S L16 AND (EPITOPE?)
L18         352 S L17 AND (CTL/CLM OR CYTOTOXIC/CLM)
L19          84 S L18 AND AY<2000

=> s l19 and Rev/clm
           563 REV/CLM
L20         10 L19 AND REV/CLM

=> d l20,ti,1-10

L20  ANSWER 1 OF 10  USPATFULL on STN
TI     Vaccines comprising synthetic genes

L20  ANSWER 2 OF 10  USPATFULL on STN
TI     Induction of REV and TAT specific cytotoxic T-cells for prevention and
       treatment of human immunodeficiency virus (HIV) infection

L20  ANSWER 3 OF 10  USPATFULL on STN
TI     Method of eliminating inhibitory/instability regions of mRNA

L20  ANSWER 4 OF 10  USPATFULL on STN
TI     HIV-SPECIFIC CYTOTOXIC T-CELL RESPONSES

L20  ANSWER 5 OF 10  USPATFULL on STN
TI     Induction of cytotoxic T-lymphocyte responses

L20  ANSWER 6 OF 10  USPATFULL on STN
TI     Induction of REV and TAT specific cytotoxic T-cells for prevention and
       treatment of human immunodeficiency virus (HIV) infection

L20  ANSWER 7 OF 10  USPATFULL on STN
TI     Method of eliminating inhibitory/ instability regions of mRNA

L20  ANSWER 8 OF 10  USPATFULL on STN
TI     Method of determining favorable prognosis against progressing from an
       asymptomatic condition to AIDS in an human immunodeficiency virus
       (HIV) positive subject

L20  ANSWER 9 OF 10  USPATFULL on STN
TI     Peptides capable of inducing immune response to HIV

L20  ANSWER 10 OF 10  USPATFULL on STN
TI     Induction of cytotoxic T-lymphocyte responses


=> d l20,cbib,clm,1-10

L20  ANSWER 1 OF 10  USPATFULL on STN
2003:74293 Vaccines comprising synthetic genes.
    Shiver, John W., Doylestown, PA, United States
    Davies, Mary Ellen, Norristown, PA, United States
    Freed, Daniel C., King of Prussia, PA, United States
    Liu, Margaret A., Rosemont, PA, United States
    Perry, Helen C., Lansdale, PA, United States
    Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)
    US 6534312 B1 20030318
    APPLICATION: US 1999-340798  19990628 (9)                    <--
    PRIORITY: US 1996-20166P  19960621 (60)
    US 1996-20165P  19960621 (60)
    US 1996-12082P  19960222 (60)
    DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
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CLM What is claimed is:

1. A synthetic polynucleotide comprising a DNA sequence encoding **HIV** env protein or a fragment thereof, the DNA sequence comprising codons optimized for expression in a mammalian host, wherein said synthetic polynucleotide is selected from the group consisting of: a) V1Jns-tPA-**HIV**$_{MN}$ gp120, wherein the 5' end which is SEQ ID NO:4 and the 3' end which is SEQ ID NO:5; b) V1Jns-tPA-**HIV**$_{IIIB}$ gp120, wherein the 5' end which is SEQ ID NO:6 and the 3' end which is SEQ ID NO:7; c) V1Jns-tPA-gp160/opt C1/opt41-A and V1Jns-tPA-gp160/opt C1/opt41-B, wherein the opt C1 comprises SEQ ID NO:30, and the gp120/41 proteolytic cleavage sites is retained in the "B" form (SEQ ID NO:33) and eliminated in the "A" form (SEQ ID NO:32); d) V1Jns-tPA-gp160/opt all-A, V1Jns-tPA-gp160/opt all-B, V1Jns-tPA gp160/opt all-A (non$_{IIIB}$ strains); V1Jns-tPA-gp160/opt all-B (non$_{IIIB}$ strains), wherein the optimized codon usage is derived from opt C1 (SEQ ID NO:30), and wherein the gp160 proteolytic cleavage site is retained in form "B" (SEQ ID NO:33) and is eliminated in form "A" (SEQ ID NO:32); e) V1Jns-tPA-gp143, V1Jns-tPA-gp143/mutRRE-A, and V1Jns-tPA-gp143/mutRRE-B, wherein the gp160 proteolytic cleavage site is retained in form "B" (SEQ ID NO:33) and is eliminated in form "A" (SEQ ID NO:32); f) V1Jns-tPA-gp143/opt32-A and V1Jns-tPA-gp143/opt32-B, comprising a gp 32 opt sequence (SEQ ID NO:34), and wherein the gp160 proteolytic cleavage site is retained in form "B" (SEQ ID NO:33) and is eliminated in form "A" (SEQ ID NO:32); g) V1Jns-tPA-gp143/SRV-1 3'-UTR, wherein the SRV-1 3' UTR comprises SEQ ID NO:35; h) V1Jns-tPA-gp143/opt C1/opt32A and V1Jns-tPA-gp143/opt C1/opt32B, wherein the optimized codon usage is derived from opt C1 (SEQ ID NO:30), and gp 32 opt (SEQ ID NO:34), and wherein the gp160 proteolytic cleavage site is retained in form "B" (SEQ ID NO:33) and is eliminated in form "A" (SEQ ID NO:32); i) V1Jns-tPA-gp143/opt all-A, V1Jns-tPA-gp143/opt all-B, V1Jns-tPA-gp143/opt all-A (non IIIB strains), and V1Jns-tPA-gp143/opt all-B (non IIIB strains), wherein the gp160 proteolytic cleavage site is retained in form "B" (SEQ ID NO:33) and is eliminated in form "A" (SEQ ID NO:32); and, j) V1Jns-tPA-gp143/opt32-A/glyB, V1Jns-tPA-gp143/opt32-B/glyB, V1Jns-tPA-gp143/opt C1/opt32-A/glyB, V1Jns-tPA-gp143/opt C1/opt32-B/glyB, V1Jns-tPA-gp143/opt all-A/glyB, V1Jns-tPA-gp143/opt all-B/glyB, V1Jns-tPA-gp143/opt all-A/glyB (non IIIB strains), V1Jns-tPA-gp143/opt all-B/glyB (non IIIB strains), which respectively contain gp 32 opt (SEQ ID NO:34) and/or opt C1 (SEQ ID NO:30), wherein the gp160 proteolytic cleavage site is retained in form "B" (SEQ ID NO:33) and is eliminated in form "A" (SEQ ID NO:32), and wherein the five carboxy-terminal amino acids of the expressed protein are NRLIKA (SEQ ID NO:27), and combinations thereof.

2. The polynucleotide of claim 1 which induces anti-**HIV** neutralizing antibody, **HIV** specific T-cell immune responses, or both, wherein said polynucleotide comprises a gene encoding an **HIV** gag, **HIV** protease and combinations thereof.

3. A method for inducing immune responses in a vertebrate against **HIV epitopes** which comprises introducing between 1 ng and 100 mg of the polynucleotide of claim 1 into the tissue of the vertebrate.

4. A method for using a **rev** independent **HIV** gene to induce immune responses in vivo which comprises: a) synthesizing the **rev** independent **HIV** gene; b) linking the synthesized gene to regulatory sequences such that the gene is expressible by virtue of being operatively linked to control sequences which, when introduced into a living tissue, direct the transcription initiation and subsequent translation of the gene.

5. A method for inducing immune responses against infection or disease caused by virulent strains of **HIV** which comprises introducing into the tissue of a vertebrate the polynucleotide of claim 1.

6. A method for inducing anti-**HIV** immune responses in a primate which comprises introducing the polynucleotide of claim 1 into the tissue of the primate and concurrently administering interleukin 12, GM-CSF, or combinations thereof parenterally.

7. A method of inducing an antigen presenting cell to stimulate **cytotoxic** and helper T-cell proliferation and effector functions including lymphokine secretion specific to **HIV** antigens which comprises exposing cells of a vertebrate in vivo to the polynucleotide of claim 1.

8. A method of inducing an immune response to **HIV** which comprises administration of the polynucleotide of claim 1 and administration of an attenuated **HIV**, a killed **HIV**, an **HIV** protein, a fragment of an **HIV** protein, or combinations thereof, wherein the administration of

the polynucleotide is prior to or simultaneous with or subsequent to the administration of the attenuated **HIV**, the killed **HIV**, the **HIV** protein, the fragment of the **HIV** protein or the combinations thereof.

9. A method of inducing an immune response to **HIV** which comprises administration of the polynucleotide of claim 1 with an adjuvant.

10. A method of treating **HIV** infection which comprises administration of the polynucleotide of claim 1 to a patient and administration of an anti-**HIV** compound to the patient, wherein the administration of the polynucleotide is prior to or simultaneous with or subsequent to the administration of the anti-**HIV** compound.

11. A method of expressing a peptide in a host comprising administration of the synthetic polynucleotide of claim 1 to the host.

12. A method of increasing production of a recombinant protein by a host, comprising: a) transforming a host cell with the synthetic polynucleotide of claim 1 to produce a transformed host; and b) cultivating the transformed host under conditions that permit expression of the synthetic polynucleotide and production of the recombinant protein.

L20 ANSWER 2 OF 10 USPATFULL on STN
2001:208643 Induction of **REV** and TAT specific cytotoxic T-cells for prevention and treatment of **human immunodeficiency virus** (**HIV**) infection

Van Baalen, Carel A., Zeewolde, Netherlands
Osterhaus, Albertus D.M.E., Bunnik, Netherlands
Erasmus Universiteit Rotterdam, Rotterdam, Netherlands (non-U.S. corporation)
US 6319666 B1 20011120
WO 9817309 19980430
APPLICATION: US 1999-284651 19990617 (9) <--
WO 1997-IB1402 19971017 19990617 PCT 371 date 19990617 PCT 102(e) date
DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A method of treatment of a host, which comprises: stimulating in the host a specific **cytotoxic** T-cell response which is specific for the **Rev** and/or Tat proteins of the immunodeficiency virus.

2. The method of claim 1 wherein the host is a human host and said immunodeficiency virus is **human immunodeficiency virus**.

3. The method of claim 2 wherein said **cytotoxic** T-cell response is stimulated by administering to the host at least one T-cell **epitope** selected from the **Rev** and Tat protein of **HIV** or a vector encoding the at least one **cytotoxic** T-cell **epitope**.

4. A method of treatment of a host, which comprises: selectively stimulating a protective **Rev** and/or Tat protein-specific **cytotoxic** T-cell response in said host.

5. The method of claim 4 wherein said immunodeficiency virus is **human immunodeficiency virus** and said host is a human host.

6. The method of claim 5 wherein said selective stimulation is effected by administering to the host at least one T-cell **epitope** selected from the **Rev** and Tat proteins of **HIV**.

7. The method of claim 6 wherein said at least one T-cell **epitope** is administered by administering the **Rev** and/or Tat **HIV** protein or a homolog thereof in which amino acids have been deleted, inserted or substituted without essentially detracting from the immunological properties thereof with a pharmaceutically-acceptable carrier therefor.

8. The method of claim 6 wherein said at least one T-cell **epitope** is administered by administering a synthetic peptide having an amino acid sequence corresponding to the T-cell **epitope** or a homolog thereof in which amino acids have been deleted, inserted or substituted without essentially detracting from the immunological properties thereof with a pharmaceutically-acceptable carrier therefor.

9. The method of claim 5 wherein said selective stimulation is effected by administering to the host a vector encoding at least one **cytotoxic** T-cell **epitope** selected from the **Rev** and Tat protein of **HIV**.

10. The method of claim 9 wherein said vector comprises a recombinant vector which expresses the **Rev** and/or Tat protein of **HIV** or a homolog thereof in which amino acids have been deleted, inserted or substituted without deviating from the immunological properties thereof.

11. At least one **cytotoxic** T-cell **epitope** selected from the **Rev** and Tat proteins of **HIV** or a vector encoding the at least one **cytotoxic** T-cell **epitope** when used as a medicament.

12. The T-cell **epitope** of claim 11 which is provided by the **Rev** and/or Tat protein of **HIV** or a homology thereof in which amino acids have been deleted, inserted or substituted without essentially detracting from the immunological properties thereof, in combination with a pharmaceutically-acceptable carrier.

13. The T-cell **epitope** of claim 11 which is provided by a recombinant vector or a nucleic acid molecule which expresses the **Rev** and/or Tat protein of **HIV**, or a homolog thereof in which amino acids have been deleted, inserted or substituted without essentially detracting from the immunological properties thereof.

14. The T-cell **epitope** of claim 11 which is provided by a synthetic peptide having an amino acid sequence corresponding to the T-cell **epitope**, or a homolog thereof in which amino acids have been deleted, inserted or substituted without essentially detracting from the immunological properties thereof, in combination with a pharmaceutical carrier therefor.

L20 ANSWER 3 OF 10 USPATFULL on STN
2001:158482 Method of eliminating inhibitory/instability regions of mRNA.
Pavlakis, George N., Rockville, MD, United States
Felber, Barbara K., Rockville, MD, United States
The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. corporation)
US 6291664 B1 20010918
APPLICATION: US 1999-414117 19991008 (9) <--
DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A nucleic acid construct, wherein said nucleic acid construct comprises a nucleic acid sequence capable of producing **HIV** Env protein in the absence of **HIV Rev** protein, and wherein said nucleic acid sequence comprises multiple point mutations which decrease the effect of an inhibitory/instability sequence which is present in the corresponding nucleic acid sequence of the native IRV env gene between nucleotides selected from the group consisting of 5606 and 6014; 6004 and 6435; 6435 and 6878; 6879 and 7266; 7266 and 7924; 8021 and 8561; 5606 and 6435; 5606 and 6878; and 6879 and 7924; using the using the numbering of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

2. A nucleic acid construct of claim 1 wherein said nucleic acid construct comprises multiple point mutations between nucleotides selected from the group consisting of 7266 and 7924; 5606 and 6878; and 6879 and 7924; using the numbering of the nucleotide sequence of the **HIV**- 1 molecular clone pHXB2.

3. A nucleic acid construct of claim 1 wherein said nucleic acid construct comprises one or more sequences selected from the group consisting of CTTGGGATGcTGATGATcTGcAGcGCcACcGAgAAgcTGTGGGTC (SEQ ID NO: 76) at positions 5834-5878; ATTATGGcGTgCCcGTGTGGAAG (SEQ ID NO: 78) at positions 5886-5908; CACTCTATTcTGcGCcTCcGAcGCcAAgGCATATGAT (SEQ ID NO: 80) at positions 5920-5956; ACAGAGGTgCAcAACgTcTGGGCCAC (SEQ ID NO: 82) at positions 5957-5982; CCAACCCcCAgGAgGTgGTgcTGGTgAAcGTGACcGAgAAcTTcAACA TGTG (SEQ ID NO: 84) at positions 6006-6057; TAACCCCcCTCTGcGTgAGccTgAAGTGCACcGAccTGAAGAATG (SEQ ID NO: 86) at positions 6135-6179; ATCAGCACcAGCATccGcGGcAAGGTGCAG (SEQ ID NO: 88) at positions 6251-6280; GAATATGCcTTcTTcTAcAAgCTgGATATAATA (SEQ ID NO: 90) at positions 6284-6316; CCAATAGcTAAgGAcACcACCAGCTAT (SEQ ID NO: 92) at positions 6317-6343; GCCCCGGCcGGcTTcGCGATcCTgAAgTGcAAcAAcAAGACGTTC (SEQ ID NO: 94) at positions 6425-6469; CAACTGCTGcTgAAcGGCAGcCTgGCcGAgGAgGAGG TAGTA (SEQ ID NO: at positions 6542-6583; TCTGCCAAcTTCACcGACAAcGCcAAgACC ATAAT (SEQ ID NO: 98) at positions 6590-6624; CTGAACCAgTCcGTgGAgATcAAcTGTACAAG (SEQ ID NO: 100) at positions 6632-6663; CAACAACAAcACcGGcAAgcGcATCCGTATC (SEQ ID NO: 102) at positions 6667-6697; GCTAGCAAgcTgcGcGAgCAgTAcGGgAAcAAcAAgACcATAATCTT (SEQ ID NO: 104) at positions 6806-6852; TTCTACTGgAAcTCcACcCAgCTGTTcAAcAGcACcTGGTTTA AT (SEQ ID NO: 106) at positions 6917-6961; CACAATCACcCTgCCcTGCcGcATcAAgCAgATcATAAACATG (SEQ ID NO: 108) at

positions 7006-7048; CATCAGCGGcCAgATccGcTGcTCcTCcAAcATcACcGGGCTGCTA (SEQ ID NO: 110) at positions 7084-7129; GAGGGACAAcTGGAGgAGcGAgcTgTAcAAgTAcAA gGTgGTgAAgATcGAA CCATTA (SEQ ID NO: 112) at positions 7195-7252; GCCTTGGAAcGCcAGcTGGAGcAAcAAgTCcCTGGAACAG (SEQ ID NO: 114) at positions 7594-7633; GAGTGGGACcGcGAgATcAACAAcTACACAAG (SEQ ID NO: 116) at positions 7658-7689; ATACACTCCcTgATcGAgGAgTCcCAgAACCAgCAgGAgAAGAATGAA (SEQ ID NO: 118) at positions 7694-7741; CAGGCCCGAgGGcATcGAgGAgGAgGGcGGc GAGAGAGAC (SEQ ID NO: 120) at positions 7954-7993; TACCACCGCcTGcGcGACcTgCTCcTGATcGTgACGAGGATcGTGGAACT (SEQ ID NO: 122) at positions 8072-8121; GGTGGGAgGCCCTCAAgTAcTGGTGGAAeCTCCTcCAGTATTGG (SEQ ID NO: 124) at positions 8136-8179; and AGTCAGGAgCTgAAGAAcAGcGCcGTgAaCcT GCTCAATG (SEQ ID NO: 126) at positions 8180-8219; using the numbering of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

4. A nucleic acid construct of claim 1 wherein said nucleic acid construct comprises one or more sequences selected from the group consisting of GAATAGTGCTGTTAACCTCCTGAACGCTACCGCTATCGCCGTGGCGGA AGGAACCGACAGGGTTATAG (SEQ ID NO: 10) at nucleotides 8194-8261; AAGTATTACAAGCCGCCTACCGCGCCATCAGACATATCCCCCGCCGCA TCCGCCAGGGCTTG (SEQ ID NO: 11) at nucleotides 8262-8323; GCTATAAGATGGGCGGTAAATGGAGCAAGTCCTCCGTC ATCGGCTGGC CTGCTGTAAG (SEQ ID NO: 12) at nucleotides 8335-8392; GGAAAGAATGCGCAGGGCCGAACCCGCCGCCGACGGAGTTGGCGCCG TATCTCGAGAC (SEQ ID NO: 13) at nucleotides 8393-8450; CTAGAAAAACACGGCGCCATTACCTCCTCTAACACCGCCGCC AATAAC GCCGCTTGTGCCTG (SEQ ID NO: 14) at nucleotides 8451-8512; and GCTAGAAGCACAGGAAGAAGAGGAAGTCGGCTTCCCCGTTACCCCTCA GGTACCTTTAAG (SEQ ID NO: 15) at nucleotides 8513-8572; using the numbering of the nucleotide sequence of the **HIV**-1 molecular clone pHB2.

5. A vector comprising a nucleic acid construct of claim 1.

6. A vector comprising a nucleic acid construct of claim 2.

7. A vector comprising a nucleic acid construct of claim 3.

8. A vector comprising a nucleic acid construct of claim 4.

9. A host cell comprising a nucleic acid construct of claim 1.

10. A host cell comprising a nucleic acid construct of claim 2.

11. A host cell comprising a nucleic acid construct of claim 3.

12. A host cell comprising a nucleic acid construct of claim 4.

13. A composition comprising a nucleic acid construct of claim 1 and a carrier.

14. A composition comprising a nucleic acid construct of claim 2 and a carrier.

15. A composition comprising a nucleic acid construct of claim 3 and a carrier.

16. A composition comprising a nucleic acid construct of claim 4 and a carrier.

17. A nucleic acid construct, wherein said nucleic acid construct comprises a nucleic acid sequence capable of producing **HIV** Pol protein in the absence of **HIV Rev** protein, and wherein said nucleic acid sequence comprises multiple point mutations which decrease the effect of an inhibitory/instability sequence which is present in the corresponding nucleic acid sequence of the native **HIV** pol gene which is present between nucleotides 3700-4194 using the numbering system of pHXB2.

18. A nucleic acid construct of claim 17 wherein said nucleic acid construct comprises the sequences GGAATATGGCAgCTgGAcTGcACgCAccTgGAgGGgAA gGTgATCCTGGTA G (SEQ ID NO: 67) at nucleotides 39504001 and TGGCCAGTAAAAACAATACAcACgGACAAcGGaAGCAAcTTCACtGGTGC TACGG (SEQ ID NO: 74) at nucleotides 4097-4151; using the numbering of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

19. A nucleic acid construct, wherein said nucleic acid construct comprises a nucleic acid sequence capable of producing **HIV** Pol protein in the absence of **HIV Rev** protein, and wherein said nucleic acid sequence comprises the sequence CCCCTCGTCACAgTAAgGATcGGGGGGCAACTcAAGGAAG CgCTgcTcGATACAGGAG (SEQ ID NO: 43) at nucleotides 1823-1879, using the numbering of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

20. A vector comprising a nucleic acid construct of claim 17.

21. A vector comprising a nucleic acid construct of claim 18.

22. A vector comprising a nucleic acid construct of claim 19.

23. A host cell comprising a nucleic acid construct of claim 17.

24. A host cell comprising a nucleic acid construct of claim 18.

25. A host cell comprising a nucleic acid construct of claim 19.

26. A composition comprising a nucleic acid construct of claim 17 and a carrier.

27. A composition comprising a nucleic acid construct of claim 18 and a carrier.

28. A composition comprising a nucleic acid construct of claim 19 and a carrier.

29. A composition according to any one of claims 13 to 16, wherein said composition is useful for inducing antibodies which react with **HIV** Env protein in a mammal; said carrier is a pharmaceutically acceptable carrier for administering to a mammal; and said nucleic acid construct is present in an amount which is capable of expressing **HIV** Env protein in an amount which is effective to induce said antibodies in said mammal.

30. A composition according to any one of claims 13 to 16, wherein said composition is useful for inducing **cytotoxic** T lymphocytes in a mammal; said carrier is a pharmaceutically acceptable carrier; and said nucleic acid construct is present in an amount which is capable of expressing **HIV** Env protein in an amount which is effective to induce said **cytotoxic** T lymphocytes in said mammal.

31. A composition according to any one of claims 26 to 28, wherein said composition is useful for inducing antibodies which react with **HIV** Pol protein in a mammal; said carrier is a pharmaceutically acceptable carrier; and said nucleic acid construct is present in an amount which is capable of expressing **HIV** Pol protein in an amount which is effective to induce said antibodies in said mammal.

32. A composition according to any one of claims 26 to 28, wherein said composition is useful for inducing **cytotoxic** T lymphocytes in a mammal, said carrier is a pharmaceutically acceptable carrier; and said nucleic acid construct is present in an amount which is capable of expressing **HIV** Pol protein in an amount which is effective to induce said **cytotoxic** T lymphocytes in said mammal.

33. A method for inducing antibodies in a mammal comprising administering to a mammal a composition of claim 29.

34. A method for inducing **cytotoxic** T lymphocytes in a mammal comprising administering to a mammal a composition of claim 30.

35. A method for inducing antibodies in a mammal comprising administering to a mammal a composition of claim 31.

36. A method for inducing **cytotoxic** T lymphocytes in a mammal comprising administering to a mammal a composition of claim 32.

37. A nucleic acid construct comprising a nucleic acid sequence capable of producing SIV Gag protein in the absence of **Rev** protein, wherein said nucleic acid sequence comprises multiple point mutations which decrease the effect of an inhibitory/instability sequence which is present in the corresponding nucleic acid sequence of the native SIV gag gene.

38. A vector comprising a nucleic acid construct of claim 37.

39. A host cell comprising a nucleic acid construct of claim 37.

40. A composition comprising a nucleic acid construct of claim 37.

41. A nucleic acid construct comprising a nucleic acid sequence capable of producing SIV Env protein in the absence of **Rev** protein, wherein said nucleic acid sequence comprises multiple point mutations which decrease the effect of an inhibitory/instability sequence which is present in the corresponding nucleic acid sequence of the native SIV env

gene.

42. A vector comprising a nucleic acid construct of claim 41.

43. A host cell comprising a nucleic acid construct of claim 41.

44. A composition comprising a nucleic acid construct of claim 41.

45. A nucleic acid construct comprising a nucleic acid sequence capable of producing SIV Pol protein in the absence of **Rev** protein, wherein said nucleic acid sequence comprises multiple point mutations which decrease the effect of an inhibitory/instability sequence which is present in the corresponding nucleic acid sequence of the native SIV pol gene.

46. A vector comprising a nucleic acid construct of claim 45.

47. A host cell comprising a nucleic acid construct of claim 45.

48. A composition comprising a nucleic acid construct of claim 45.

L20 ANSWER 4 OF 10 USPATFULL on STN
2001:150268 **HIV**-SPECIFIC CYTOTOXIC T-CELL RESPONSES.
SIA, CHARLES D. Y., THORNHILL, Canada
CHONG, PELE, RICHMOND HILL, Canada
KLEIN, MICHEL H., WILLOWDALE, Canada
US 2001019714 A1 20010906
APPLICATION: US 1998-55744 A1 19980407 (9) <--
DOCUMENT TYPE: Utility; APPLICATION.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A method of generating an **HIV**-specific **cytotoxic** T-cell (**CTL**) response in a host, which comprises: administering to the host a T-helper molecule to prime T-helper cells of the immune system of the host, and subsequently administering to the host a mixture of said T-helper molecule and a T-cell inducing **HIV**-derived molecule to generate an **HIV**-specific T-cell response in the host.

2. The method of claim 1 wherein said T-helper molecule is selected from HLA class II restricted T-helper **epitopes**.

3. The method of claim 2 wherein said T-helper **epitopes** are selected from the group consisting of DP, DR and DQ-specific T-cell **epitopes**.

4. The method of claim 2 wherein said T-helper molecule is CLP-243 (SEQ ID NO:10).

5. The method of claim 1 wherein said T-helper molecule is administered with an adjuvant.

6. The method of claim 1 wherein said T-cell inducing **HIV**-derived molecule includes a peptide corresponding to a portion of an **HIV**-1 antigen and containing at least one T-cell **epitope**.

7. The method of claim 5 wherein said peptide correspond to sequences of the **Rev** protein of **HIV**-1.

8. The method of claim 6 wherein said peptide is a lipopeptide.

9. The method of claim 8 wherein the lipid is palmitoyl or cholesterol.

10. The method of claim 7 wherein said lipopeptide is CLP-175 or CLP-176.

11. The method of claim 6 wherein said mixture is administered with an adjuvant.

12. A peptide having an amino acid corresponding to amino acids 52 to 116 (SEQ ID No:9) of the sequence of the **Rev** protein of **HIV**-1 LAI isolate and containing T-cell **epitopes** within amino acids 63 to 73 (SEQ ID NO:3), 74 to 83 (SEQ ID NO:5) and 102 to 110 (SEQ ID NO:8), or having a corresponding amino acid sequence from another **HIV**-I isolate.

13. The peptide of claim 12 in the form of a lipopeptide.

14. The peptide of claim 13 wherein the lipid is palmitoyl or cholesterol.

15. The peptide of claim 13 wherein the lipopeptide is CLP-175 or CLP-176.

L20 ANSWER 5 OF 10 USPATFULL on STN
2001:125555 Induction of cytotoxic T-lymphocyte responses.
Raychaudhuri, Syamal, San Diego, CA, United States
Rastetter, William H., Rancho Santa Fe, CA, United States
IDEC Pharmaceuticals Corporation, San Diego, CA, United States (U.S. corporation)
US 6270769 B1 20010807
APPLICATION: US 1995-449728 19950524 (8) <--
DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. A method of treating a human infected with **HIV** virus, comprising administering a composition comprising an **HIV** antigen mixed with a microfluidized antigen formulation comprising: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation lacking an immunostimulating peptide component, and being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

2. The method of claim 1, wherein said **HIV** antigen is selected from gp160, gag, pol, Nef, Tat, and **Rev**.

3. A method of treating a human infected with malaria, comprising administering a composition comprising a malaria-associated antigen mixed with a microfluidized antigen formulation comprising: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation lacking an immunostimulating peptide component, and being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

4. The method of claim 2, wherein said malaria-associated antigen is selected from CS protein, and Sporozoite surface protein 2.

5. A method of treating a human infected with influenza, comprising administering a composition comprising an influenza-associated antigen mixed with a microfluidized antigen formulation comprising: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation lacking an immunostimulating peptide component, and being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

6. The method of claim 5, wherein said influenza-associated antigen is selected from HA, NP, and NA.

7. A method of treating a human infected with hepatitis, comprising administering a composition comprising a hepatitis-associated antigen mixed with a microfluidized formulation comprising: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation lacking an immunostimulating peptide component, and being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

8. The method of claim 7, wherein said hepatitis-associated antigen is selected from hepatitis A surface antigen, Pre-S1, Pre-S2, HBc Ag, and HBe Ag.

9. A method of treating a human having a cancer, comprising administering a composition comprising a cancer-associated antigen mixed with a microfluidized antigen formulation comprising: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation lacking an immunostimulating peptide component, and being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

10. A method of claim 9, wherein said cancer-associated antigen is

selected from Carcinoma CEA, Carconoma associated mucin, P21, carcinoma P53, melanoma MPG, melanoma p97, and carcinoma Neu oncogene product, carcinoma p53 gene product, and mutated p21 ras protein.

11. A method of treating a human infected with herpes virus, comprising administering a composition comprising a herpes antigen mixed with a microfluidized antigen formulation comprising: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation lacking an immunostimulating peptide component, and being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

12. The method of claim 11, wherein said herpes virus antigen is selected from EBV gp340, EBV gp85, HSV gB, HSV gD, HSV gH, HSV early protein product, cytomealovirus gB, cytomegalovirus gH and IE protein gP72.

13. A method of treating a human infected with respiratory syncytial virus, comprising administering a composition comprising a respiratory syncytial antigen mixed with a microfluidized antigen formulation comprising: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation lacking an immunostimulating peptide component, and being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

14. The method of claim 13 wherein said Respiratory Syncytial virus antigen is selected from F protein, G protein, and N protein.

15. A method for inducing a **cytotoxic** T-lymphocyte response in a human, comprising the steps of: administering a mixture of an antigen mixed with a microfluidized antigen formulation consisting essentially of two of: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation being formulated as a stable oil-in-water emulsion; wherein said mixture is administered to said human or animal in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said human or animal.

16. The method of claim 15, wherein said human is infected with a virus and suffers one or more symptoms of infection from said virus.

17. The method of claim 15, wherein said antigen formulation is non-toxic to said human.

18. The method or claim 15, wherein said antigen is chosen from antigenic portions of the **HIV** antigens: gp160, gag, pol, Nef, Tat, and **Rev**; the malaria antigens: CS protein and Sporczoite surface protein 2; the Hepatitis B surface antigens: Pre-S1, Pre-S2, HBc Ag, and HBe Ag; the influenza antigens: HA, NP and NA; Hepatitis A surface antigens; the Herpes virus antigens: EBV gp340, EBV gp85, HSV gB, HSV gD, HSV gH, HSV early protein product, cytomegalovirus gB, cytomegalovirus gH, and IE protein gP72; the respiratory syncytial virus antigens: F protein, G protein, and N protein; and the tumor antigens carcinoma CEA, carcinoma associated mucin, carcinoma P21, carcinoma P53, melanoma MPG, melanoma p97, and carcinoma Neu oncogene product, carcinoma p53 gene product, and mutated p21 ras protein.

19. A method of treating a human infected with **HIV** virus, comprising administering a composition comprising an **HIV** antigen mixed with a microfluidized antigen formulation consisting essentially of two of: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

20. The method of claim 19, wherein said **HIV** antigen is selected from gp160, gag, pol, Nef, Tat, and **Rev**.

21. A method of treating a human having malaria, comprising administering a composition comprising a malaria-associated antigen mixed with a microfluidized antigen formulation consisting essentially of two of: (a) stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to

induce a **cytotoxic** T-lymphocyte response in said patient.

22. The method of claim 21, wherein said malaria-associated antigen is selected from CS protein, and Sporozoite surface protein 2.

23. A method of treating a human infected with influenza, comprising administering a composition comprising an influenza-associated antigen mixed with a microfluidized antigen formulation consisting essentially of two of: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

24. The method of claim 23, wherein said influenza-associated antigen is selected from HA, NP, and NA.

25. A method of treating a human having hepatitis, comprising administering a composition comprising a hepatitis-associated antigen mixed with a microfluidized antigen formulation consisting essentially of two of: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

26. The method of claim 25, wherein said hepatitis-associated antigen is selected from hepatitis A surface antigen, Pre-S1, Pre-S2, HBc Ag, and HBe Ag.

27. A method of treating a human having a cancer, comprising administering a composition comprising a cancer-associated antigen mixed with a microfluidized antigen formulation consisting essentially of two of: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

28. The method of claim 27, wherein said cancer-associated antigen is selected from Carcinoma CEA, Carconoma associated mucin, P21, carcinoma P53, melanoma MPG, melanoma p97, and carcinoma Neu oncogene product, carcinoma p53 gene product, and mutated p21 ras protein.

29. A method of treating a human infected with herpes virus, comprising administering a composition comprising a herpes antigen mixed with a microfluidized antigen formulation consisting essentially of two of: (a) stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

30. The method of claim 29, wherein said herpes virus antigen is selected from EBV gp340, EBV gp85, HSV gB, HSV gD, HSV gH, HSV early protein product, cytomegalovirus gB, cytomegalovirus gH and IE protein gP72.

31. A method of treating a human infected with respiratory syncytial virus, comprising administering a respiratory syncytial antigen mixed with a microfluidized antigen formulation consisting essentially of two of: (a) stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation being formulated as a stable oil-in-water emulsion; wherein said composition is administered to said patient in an amount sufficient to induce a **cytotoxic** T-lymphocyte response in said patient.

32. The method of claim 31 wherein said Respiratory Syncytial virus antigen is selected from F protein, G protein, and N protein.

33. The method of any of claims 13-32 wherein said antigen formulation consists essentially of said detergent and said micelle-forming agent.

34. The method of any of claims 13-32 wherein said antigen formulation consists essentially of said detergent and said oil.

35. The method of any of claims 13-32 wherein said antigen formulation consists essentially of said oil and said micelle-forming agent.

L20 ANSWER 6 OF 10 USPATFULL on STN
2000:18053 Induction of **REV** and TAT specific cytotoxic T-cells for prevention and treatment of **human immunodeficiency virus** (**HIV**) infection.
van Baalen, Carel A., Zeewolde, Netherlands
Osterhaus, Albertus D. M. E., Bunnik, Netherlands
Erasums University Rotterdam, Rotterdam, Netherlands (non-U.S. corporation)
US 6024965 20000215
APPLICATION: US 1996-733789 19961018 (8) <--
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. An immunogenic composition which consists essentially of: (1) at least one **cytotoxic** T-cell **epitope** selected from the group consisting of the **cytotoxic** T-cell **epitope** of the **Rev** protein and the **cytotoxic** T-cell **epitope** of the Tat protein effective to generate a specific **cytotoxic** T-cell response to the **Rev** and/or Tat proteins of an immunodeficiency virus, or (2) a vector encoding at least one **cytotoxic** T-cell **epitope** selected from the group consisting of the **cytotoxic** T-cell **epitope** of the **Rev** protein and the **cytotoxic** T-cell **epitope** of the Tat protein effective to generate a specific **cytotoxic** T-cell response to the **Rev** and/or Tat proteins of an immunodeficiency virus.

2. The immunogenic composition of claim 1 wherein said immunodeficiency virus is **human immunodeficiency virus**.

3. The immunogenic composition of claim 2 wherein there is present a **cytotoxic** T-cell **epitope** from the **Rev** protein and a **cytotoxic** T-cell **epitope** from the Tat protein.

L20 ANSWER 7 OF 10 USPATFULL on STN
1999:125062 Method of eliminating inhibitory/ instability regions of mRNA.
Pavlakis, George N., Rockville, MD, United States
Felber, Barbara K., Rockville, MD, United States
The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)
US 5965726 19991012
APPLICATION: US 1997-850049 19970502 (8) <--
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. A composition comprising a nucleic acid construct and a carrier, wherein said nucleic acid construct comprises a nucleic acid sequence capable of producing **HIV** gag protein in the absence of **HIV Rev** protein, and wherein said nucleic acid sequence comprises multiple point mutations which decrease the effect of an inhibitory/instability sequence which is present in the corresponding nucleic acid sequence of the native **HIV** gag gene.

2. A composition of claim 1 wherein said nucleic acid construct comprises multiple point mutations between nucleotides corresponding to nucleotides 402 and 452, 536 and 583, 585 and 634, and 654 and 703 of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

3. A composition of claim 2 wherein said nucleic acid construct comprises the following nucleotide sequences: CCAGGGGGAAAGAAGAAGTACAAGCTAAAGCACATCGTATGGGCAAGCAGG (SEQ ID NO: 6) at nucleotides corresponding to nucleotides 402-452 of the **HIV**-1 molecular clone pHXB2; CCTTCAGACAGGATCAGAGGAGCTTCGATCACTATACAACACAGTAGC (SEQ ID NO: 7) at nucleotides corresponding to nucleotides 536-583 of the **HIV**-1 molecular clone pHXB2; ACCCTCTATTGTGTGCACCAGCGGATCGAGATCAAGG ACACCAAGGAAGC (SEQ ID NO: 8) at nucleotides corresponding to nucleotides 585-634 of the **HIV**-1 molecular clone pHXB2; and GAGCAAAACAAGTCCAAGAAGAAGGCCCAGCAGGCAGCAGCTGACACAGG (SEQ ID NO: 9) at nucleotides corresponding to nucleotides 654-703 of the **HIV**-1 molecular clone pHXB2.

4. A composition of claim 1 wherein said nucleic acid construct comprises multiple point mutations between nucleotides corresponding to nucleotides 402 and 452, 536 and 583, 585 and 634, 654 and 703, 871 and 915, 1105 and 1139, 1140 and 1175, and 1321 and 1364 of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

5. A composition of claim 4 wherein said nucleic acid construct comprises the following nucleotide sequences: CCAGGGGGAAAGAAGAAGTACAAGCTAAAGCACATCGTATGGGCAAGCAGG (SEQ ID NO: 6) at nucleotides corresponding to nucleotides 402-452 of the **HIV**-1

molecular clone pHXB2; CCTTCAGACAGGATCAGAGGAGCTTCGATCACTATACAACACAGTAGC (SEQ ID NO: 7) at nucleotides corresponding to nucleotides 536-583 of the **HIV**-1 molecular clone pHXB2; ACCCTCTATTGTGTGCACCAGCGGATCGAGATCAAGG ACACCAAGGAAGC (SEQ ID NO: 8) at nucleotides corresponding to nucleotides 585-634 of the **HIV**-1 molecular clone pHXB2; GAGCAAAACAAGTCCAAGAAGAAGGCCCAGCAGGCAGCAGCTGACACAGG (SEQ ID NO: 9) at nucleotides corresponding to nucleotides 654-703 of the **HIV**-1 molecular clone pHXB2; CCACCCCACAGGACCTGAACACGATGTTGAACACCGTGGGGGGAC (SEQ ID NO: 25) at nucleotides corresponding to nucleotides 871-915 of the **HIV**-1 molecular clone pHXB2; CAGTAGGAGAGATCTACAAGAGGTGGATAATCCTG (SEQ ID NO: 27) at nucleotides corresponding to nucleotides 1105-1139 of the **HIV**-1 molecular clone pHXB2; GGATTGAACAAGATCGTGAGGATGTATAGCCCTACC (SEQ ID NO: 29) at nucleotides corresponding to nucleotides 1140-1175 of the **HIV**-1 molecular clone pHXB2; and ATTGTAAGACCATCCTGAAGGCTCTCGGCCCAG CGGCTACACTA (SEQ ID NO: 33) at nucleotides corresponding to nucleotides 1321-1364 of the **HIV**-1 molecular clone pHXB2.

6. The construct of claim 5 wherein said nucleic acid construct comprises the nucleotide sequence: _____

_____

ATG GGT GCG AGA GCG TCA GTA TTA AGC GGG GGA GAA TTA GAT
CGA TGG GAA AAA ATT CGG TTA AGG CCA GGG GGA AAG AAG AAG TAC AAG
CTA AAG CAC ATC GTA TGG GCA AGC AGG GAG CTA GAA CGA TTC GCA GTT
AAT CCT GGC CTG TTA GAA ACA TCA GAA GGC TGT AGA CAA ATA CTG GGA
CAG CTA CAA CCA TCC CTT CAG ACA GGA TCA GAG GAG CTT CGA TCA CTA
TAC AAC ACA GTA GCA ACC CTC TAT TGT GTG CAC CAG CGG ATC GAG ATC
AAG GAC ACC AAG GAA GCT TTA GAC AAG ATA GAG GAA GAG CAA AAC AAG
TCC AAG AAG AAG GCC CAG CAG GCA GCA GCT GAC ACA GGA CAC AGC AAT
CAG GTC AGC CAA AAT TAC CCT ATA GTG CAG AAC ATC CAG GGG CAA ATG
GTA CAT CAG GCC ATA TCA CCT AGA ACT TTA AAT GCA TGG GTA AAA GTA
GTA GAA GAG AAG GCT TTC AGC CCA GAA GTG ATA CCC ATG TTT TCA GCA
TTA TCA GAA GGA GCC ACC CCA CAG GAC CTG AAC ACG ATG TTG AAC ACC
GTG GGG GGA CAT CAA GCA GCC ATG CAA ATG TTA AAA GAG ACC ATC AAT
GAG GAA GCT GCA GAA TGG GAT AGA GTG CAT CCA GTG CAT GCA GGG CCT
ATT GCA CCA GGC CAG ATG AGA GAA CCA AGG GGA AGT GAC ATA GCA GGA
ACT ACT AGT ACC CTT CAG GAA CAA ATA GGA TGG ATG ACA AAT AAT CCA
CCT ATC CCA GTA GGA GAG ATC TAC AAG AGG TGG ATA ATC CTG GGA TTG
AAC AAG ATC GTG AGG ATG TAT AGC CCT ACC AGC ATT CTG GAC ATA AGA
CAA GGA CCA AAG GAA CCC TTT AGA GAC TAT GTA GAC CGG TTC TAT AAA
ACT CTA AGA GCT GAG CAA GCT TCA CAG GAG GTA AAA AAT TGG ATG ACA
GAA ACC TTG TTG GTC CAA AAT GCG AAC CCA GAT TGT AAG ACC ATC CTG
AAG GCT CTC GGC CCA GCG GCT ACA CTA GAA GAA ATG ATG ACA GCA TGT
CAG GGA GTA GGA GGA CCC GGC CAT AAG GCA AGA GTT TTG (nucleotides 729 to 1817 of
Sequence I.D. No. 129).

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7. A composition of claim 1 wherein said nucleic acid construct comprises multiple point mutations between nucleotides corresponding to nucleotides 402 and 452, 536 and 583, 585 and 634, 654 and 703, 871 and 915, 1105 and 1139, 1140 and 1175, 1321 and 1364, 1416 and 1466, 1470 and 1520, 1527 and 1574, and 1823 and 1879 of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

8. A composition of claim 7 wherein said nucleic acid construct comprises the following nucleotide sequences: AGAGTTTTGGCCGAGGCGATGAGCCAGGTGACGAACTCGGCGACCATAATG (SEQ ID NO: 35) at nucleotides corresponding to nucleotides 1416-1466 of the **HIV**-1 molecular clone pHXB2; CAGAGAGGCAACTTCCGGAACCAGCGGAAGATCGTCAAGTGTTTCAATT GT (SEQ ID NO: 37) at nucleotides corresponding to nucleotides 1470-1520 of the **HIV**-1 molecular clone pHXB2; GAAGGGCACACCGCCAGGAACTGCCGGGCCCCCC GGAAGAAGGGCTGT (SEQ ID NO: 39) at nucleotides corresponding to nucleotides 1527-1574 of the **HIV**-1 molecular clone pHXB2; and CCCCTCGTCACAGTAAGGATCGGGGGCAACTCAAGGAAGCGCTGCTCGATA CAGGAG (SEQ ID NO: 43) at nucleotides corresponding to nucleotides 1823-1879 of the **HIV**-1 molecular clone pHXB2.

9. A composition of claim 1 wherein said nucleic acid construct comprises multiple point mutations between nucleotides corresponding to nucleotides 402 and 452, and nucleotides 536-583, of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

10. A composition of claim 9 wherein said nucleic acid construct comprises the following nucleotide sequences: CCAGGGGGAAAGAAGAAGTACAAGCTAAAGCACATCGTATGGGCAAGCAGG (SEQ ID NO: 6) at nucleotides corresponding to nucleotides 402-452 of the **HIV**-1 molecular clone pHXB2; and CCTTCAGACAGGATCAGAGGAGCTTCGATCACTATACAACACAGT

AGC (SEQ ID NO: 7) at nucleotides corresponding to nucleotides 536-583 of the **HIV**-1 molecular clone pHXB2.

11. A composition of claim 1 wherein said nucleic acid construct comprises multiple point mutations between nucleotides corresponding to nucleotides 402 and 452, and nucleotides 585 and 634, of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

12. A composition of claim 11 wherein said nucleic acid construct comprises the following nucleotide sequences: CCAGGGGGAAAGAAGAAGTACAAGCTAAAGCACATCGTATGGGCAAGCAGG (SEQ ID NO: 6) at nucleotides corresponding to nucleotides 402-452 of the **HIV**-1 molecular clone pHXB2; and ACCCTCTATTGTGTGCACCAGCGGATCGAGATCAAGGACACCAAG GAAGC (SEQ ID NO: 8) at nucleotides corresponding to nucleotides 585-634 of the **HIV**-1 molecular clone pHXB2.

13. A composition of claim 1 wherein said nucleic acid construct comprises multiple point mutations between nucleotides corresponding to nucleotides 402 and 452, and nucleotides 654 and 703, of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

14. A composition of claim 13 wherein said nucleic acid construct comprises the following nucleotide sequences: CCAGGGGGAAAGAAGAAGTACAAGCTAAAGCACATCGTATGGGCAAGCAGG (SEQ ID NO: 6) at nucleotides corresponding to nucleotides 402-452 of the **HIV**-1 molecular clone pHXB2; and GAGCAAAACAAGTCCAAGAAGAAGGCCCAGCAGGCAGCAGCTGAC ACAGG (SEQ ID NO: 9) at nucleotides corresponding to nucleotides 654-703 of the **HIV**-1 molecular clone pHXB2.

15. A composition of claim 1 wherein said nucleic acid construct comprises multiple point mutations between nucleotides corresponding to nucleotides 536 and 583, and nucleotides 585 and 634, of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

16. A composition of claim 15 wherein said nucleic acid construct comprises the following nucleotide sequences: CCTTCAGACAGGATCAGAGGAGCTTCGATCACTATACAACACAGTAGC (SEQ ID NO: 7) at nucleotides corresponding to nucleotides 536-583 of the **HIV**-1 molecular clone pHXB2; and ACCCTCTATTGTGTGCACCAGCGGATCGAGATCAAGGACACCAAG GAAGC (SEQ ID NO: 8) at nucleotides corresponding to nucleotides 585-634 of the **HIV**-1 molecular clone pHXB2.

17. A composition of claim 1 wherein said nucleic acid construct comprises multiple point mutations between nucleotides corresponding to nucleotides 536 and 583, and nucleotides 654 and 703, of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

18. A composition of claim 17 wherein said nucleic acid construct comprises the following nucleotide sequences: CCTTCAGACAGGATCAGAGGAGCTTCGATCACTATACAACACAGTAGC (SEQ ID NO: 7) at nucleotides corresponding to nucleotides 536-583 of the **HIV**-1 molecular clone pHXB2; and GAGCAAAACAAGTCCAAGAAGAAGGCCCAGCAGGCAGCAGCTGAC ACAGG (SEQ ID NO: 9) at nucleotides corresponding to nucleotides 654-703 of the **HIV**-1 molecular clone pHXB2.

19. A composition of claim 1 wherein said nucleic acid construct comprises multiple point mutations between nucleotides corresponding to nucleotides 585 and 634, and nucleotides 654 and 703, of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

20. A composition of claim 19 wherein said nucleic acid construct comprises the following nucleotide sequences: ACCCTCTATTGTGTGCACCAGCGGATCGAGATCAAGGACACCAAGGAAGC (SEQ ID NO: 8) at nucleotides corresponding to nucleotides 585-634 of the **HIV**-1 molecular clone pHXB2; and GAGCAAAACAAGTCCAAGAAGAAGGCCCAGCAGGCAGCAGCTGAC ACAGG (SEQ ID NO: 9) at nucleotides corresponding to nucleotides 654-703 of the **HIV**-1 molecular clone pHXB2.

21. A composition comprising a nucleic acid construct and a carrier, wherein said nucleic acid construct comprises a nucleic acid sequence capable of producing **HIV** env protein in the absence of **HIV Rev** protein, and wherein said nucleic acid sequence comprises multiple point mutations which decrease the effect of an inhibitory/instability sequence which is present in the corresponding nucleic acid sequence of the native **HIV** env gene.

22. A composition of claim 21 wherein said nucleic acid construct comprises multiple point mutations between nucleotides corresponding to nucleotides 8194 and 8261, 8262 and 8323, 8335 and 8392, 8393 and 8450,

8451 and 8512, and 8513 and 8572 of the nucleotide sequence of the **HIV**-1 molecular clone pHXB2.

23. A composition according to claim 22 wherein said nucleic acid construct comprises the following sequence GAATAGTGCTGTTAACCTCCTGAACGCTA CCGCTATCGCCGTGGCGGAAGGAA CCGACAGGGTTATAG (SEQ ID NO: 10) at nucleotides corresponding to nucleotides 8194-8261 of the **HIV**-1 molecular clone pHXB2; AAGTATTACAAGCCGCCTACCGCGCCATCAGACATATCCCCCGCCGCATCCGC CAGGGCTTG (SEQ ID NO: 11) at nucleotides corresponding to nucleotides 8262-8323 of the **HIV**-1 molecular clone pHXB2; GCTATAAGATGGGCGGTAAATGGAGCAAGTCCTCCGT CATCGGCTGGCCTGCT GTAAG (SEQ ID NO: 12) at nucleotides corresponding to nucleotides 8335-8392 of the **HIV**-1 molecular clone pHXB2; GGAAAGAATGCGCAGGGCCGAACCCGCCGCCGACGGAGTTGGCGCCGTATCT CGAGAC (SEQ ID NO: 13) at nucleotides corresponding to nucleotides 8393-8450 of the **HIV**-1 molecular clone pHXB2; CTAGAAAAACACGGCGCCATTACCTCCTCTAACACCGCCGCCAATAACG CCGC TTGTGCCTG (SEQ ID NO: 14) at nucleotides corresponding to nucleotides 8451-8512 of the **HIV**-1 molecular clone pHXB2; and GCTAGAAGCACAGGAAGAAGAGGAAGTCGGCTTCCCCGTTACCCCTCAGGTA CCTTTAAG (SEQ ID NO: 15) at nucleotides corresponding to nucleotides 8513-8572 of the **HIV**-1 molecular clone pHXB2.

24. A composition comprising a nucleic acid construct and a carrier, wherein said nucleic acid construct comprises a nucleic acid sequence capable of producing **HIV** pol protein in the absence of **HIV Rev** protein, and wherein said nucleic acid sequence comprises multiple point mutations which decrease the effect of an inhibitory/instability sequence which is present in the corresponding nucleic acid sequence of the native **HIV** pol gene.

25. A composition according to any one of claims 1 to 20, wherein said composition is useful for inducing antibodies which react with **HIV** gag protein in a mammal; said carrier is a pharmaceutically acceptable carrier for administering to a mammal; and said nucleic acid construct is present in an amount which is capable of expressing **HIV** gag protein in an amount which is effective to induce said antibodies in said mammal.

26. A composition according to any one of claims 1 to 20, wherein said composition is useful for inducing **cytotoxic** T lymphocytes in a mammal; said carrier is a pharmaceutically acceptable carrier; and said nucleic acid construct is present in an amount which is capable of expressing **HIV** gag protein in an amount which is effective to induce said **cytotoxic** T lymphocytes in said mammal.

27. A composition according to any one of claims 21 to 23, wherein said composition is useful for inducing antibodies which react with **HIV** env protein in a mammal; said carrier is a pharmaceutically acceptable carrier; and said nucleic acid construct is present in an amount which is capable of expressing **HIV** env protein in an amount which is effective to induce said antibodies in said mammal.

28. A composition according to any one of claims 21 to 23, wherein said composition is useful for inducing **cytotoxic** T lymphocytes in a mammal, said carrier is a pharmaceutically acceptable carrier; and said nucleic acid construct is present in an amount which is capable of expressing **HIV** env protein in an amount which is effective to induce said **cytotoxic** T lymphocytes in said mammal.

29. A composition according to claim 24, wherein said composition is useful for inducing antibodies which react with **HIV** pol protein in a mammal; said carrier is a pharmaceutically acceptable carrier; and said nucleic acid construct is present in an amount which is capable of expressing **HIV** pol protein in an amount which is effective to induce said antibodies in said mammal.

30. A composition according claim 24, wherein said composition is useful for inducing **cytotoxic** T lymphocytes in a mammal; said carrier is a pharmaceutically acceptable carrier; and said nucleic acid construct is present in an amount which is capable of expressing **HIV** pol protein in an amount which is effective to induce said **cytotoxic** T lymphocytes in said mammal.

31. A method for inducing antibodies in a mammal comprising administering to a mammal a composition of claim 25.

32. A method for inducing **cytotoxic** T lymphocytes in a mammal comprising administering to a mammal a composition of claim 26.

33. A method for inducing antibodies in a mammal comprising

administering to a mammal a composition of claim 27.

34. A method for inducing **cytotoxic** T lymphocytes in a mammal comprising administering to a mammal a composition of claim 28.

35. A method for inducing antibodies in a mammal comprising administering to a mammal a composition of claim 29.

36. A method for inducing **cytotoxic** T lymphocytes in a mammal comprising administering to a mammal a composition of claim 30.

L20 ANSWER 8 OF 10 USPATFULL on STN
1999:99549 Method of determining favorable prognosis against progressing from an asymptomatic condition to AIDS in an **human immunodeficiency virus** (**HIV**) positive subject.
van Baalen, Carel A., Zeewolde, Netherlands
Osterhaus, Albertus D. M. E., Bunnik, Netherlands
Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
US 5942401 19990824
APPLICATION: US 1997-995916 19971222 (8) <--
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A method of determining favourable prognosis against progressing from an asymptomatic condition to AIDS in an **HIV** positive subject, which comprises: detecting in the subject, by in vitro assay, the presence of a **cytotoxic** T-cell response to **Rev** and/or Tat **HIV** protein as an indication of said favourable prognosis.

2. A method of diagnosing an **HIV** positive human, which comprises: obtaining a sample of peripheral blood mononuclear cells from the human, and testing the sample for the presence of a specific **cytotoxic** T-cell response to **Rev** and/or Tat **HIV** protein as an indication of a stable asymptomatic **HIV**-caused disease condition which does not progress to AIDS.

L20 ANSWER 9 OF 10 USPATFULL on STN
1998:58087 Peptides capable of inducing immune response to **HIV**.
Takiguchi, Masafumi, Tokyo, Japan
Miwa, Kiyoshi, Kawasaki, Japan
Ajinomoto Co., Inc., Tokyo, Japan (non-U.S. corporation)
US 5756666 19980526
WO 9511255 19950427
APPLICATION: US 1996-615181 19960404 (8) <--
WO 1994-JP1756 19941019 19960404 PCT 371 date 19960404 PCT 102(e) date
PRIORITY: JP 1993-261302 19931019
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A peptide fragment of an **HIV** protein which has a length of 8 to 11 amino acid residues, binds to HLA, and induces production of **cytotoxic** T lymphocytes against cells infected with **HIV**, wherein the second amino acid residue is Pro, and the C-terminal amino acid residue is selected from the group consisting of Tyr, Leu, Ile, Met, Phe and Ala.

2. The peptide fragment of claim 18, wherein the **HIV** protein is selected from the group consisting of pol, gag, vpr, vif, **rev** and env.

3. The peptide fragment of claim 1 having the sequence of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 or 24.

4. A peptide fragment of an **HIV** protein which has a length of 8 to 11 amino acid residues, binds to HLA, and induces production of **cytotoxic** T lymphocytes against cells infected with **HIV**, wherein the second amino acid residue is selected from the group consisting of Pro, Ala and Gly, and the C-terminal amino acid residue is selected from the group consisting of Ile, Leu, Val, Phe and Met.

5. The peptide fragment of claim 4, wherein the **HIV** protein is selected from the group consisting of pol, gag, vpr, vif, **rev** and env.

6. The peptide fragment of claim 3 having the sequence of SEQ ID NO: 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45 or 46.

7. A peptide fragment of an **HIV** protein which has a length of 8 to 11

amino acid residues, binds to HLA, and induces production of **cytotoxic** T lymphocytes against cells infected with **HIV**, wherein the second amino acid residue is selected from the group consisting of Leu, Val, Tyr, and Phe, and the C-terminal amino acid residue is Arg.

8. The peptide fragment of claim 7, wherein the **HIV** protein is selected from the group consisting of pol, gag, vpr, vif, **rev** and env.

9. The peptide fragment of claim 5 having the sequence of SEQ ID NO: 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62 or 63.

10. An immunogenic composition, comprising the peptide fragment of claim 1 and a pharmaceutically acceptable carrier and/or a pharmaceutically acceptable diluent.

11. An immunogenic composition, comprising the peptide fragment of claim 4 and a pharmaceutically acceptable carrier and/or a pharmaceutically acceptable diluent.

12. An immunogenic composition, comprising the peptide fragment of claim 7 and a pharmaceutically acceptable carrier and/or a pharmaceutically acceptable diluent.

13. A method of inducing **cytotoxic** T lymphocytes comprising contacting the peptide fragment of claim 1 with peripheral blood lymphocytes having HLA-B antigens.

14. A method of inducing **cytotoxic** T lymphocytes comprising contacting the peptide fragment of claim 4 with peripheral blood lymphocytes having HLA-B antigens.

15. A method of inducing **cytotoxic** T lymphocytes comprising contacting the peptide fragment of claim 7 with peripheral blood lymphocytes having HLA-A antigens.

16. A method of inducing **cytotoxic** T lymphocytes, comprising administering the peptide fragment of claim 1 to a patient in need thereof.

17. A method of inducing **cytotoxic** T lymphocytes, comprising administering the peptide fragment of claim 4 to a patient in need thereof.

18. A method of inducing **cytotoxic** T lymphocytes, comprising administering the peptide fragment of claim 7 to a patient in need thereof.

19. A DNA encoding the peptide fragment of claim 1.

20. A DNA encoding the peptide fragment of claim 4.

21. A DNA encoding the peptide fragment of claim 7.

22. A method of screening peptides for induction of **cytotoxic** T lymphocytes comprising: contacting peptide fragments of an **HIV** protein having a length of 8 to 11 amino acid residues with cells that are deficient in transporter associated protein antigen and express HLA class I antigen; selecting peptides which maintain the expression of the HLA class I antigen on the cells; and contacting the selected peptides with peripheral blood lymphocytes of a patient infected with **HIV**.

L20 ANSWER 10 OF 10 USPATFULL on STN
1998:6785 Induction of cytotoxic T-lymphocyte responses.
Raychaudhuri, Syamal, San Diego, CA, United States
Rastetter, William H., Rancho Santa Fe, CA, United States
IDEC Pharmaceuticals Corporation, San Diego, CA, United States (U.S. corporation)
US 5709860 19980120
APPLICATION: US 1994-351001 19941207 (8) <--
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A composition comprising an antigen mixed with a microfluidized antigen formulation comprising: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation being formulated as a stable oil-in-water emulsion, said antigen formulation being substantially free of immunostimulating peptides and wherein said composition upon

administration to an animal selected from the group consisting of humans, domesticated animals and agricultural animals is capable of inducing a specific **cytotoxic** T-lymphocyte response against the antigen contained in the composition.

2. The composition of claim 1, wherein said antigen is chosen from antigenic portions of the **HIV** antigens: gp160, gag, pol, Nef, Tat, and **Rev**; the malaria antigens: CS protein and Sporozoite surface protein 2; the Hepatitis B surface antigens: Pre-S1, Pre-S2, HBc Ag, and HBe Ag; the influenza antigens: HA, NP and NA; Hepatitis A surface antigens; the Herpes virus antigens: EBV gp340, EBV gp85, HSV gB, HSV gD, HSV gH, HSV early protein product, cytomegalovirus gB, cytomegalovirus gH, and IE protein gp72; the respiratory syncytial virus antigens: F protein, G protein, and N protein; and the tumor antigens: carcinoma CEA, carcinoma associated mucin, carcinoma P21, carcinoma P53, melanomaMPG, melanoma p97, carcinoma Neu oncogene product, carcinoma p53 gene product, and mutated p21 ras protein.

3. A composition comprising an antigen mixed with a microfluidized antigen formulation comprising: (a) a stabilizing detergent, (b) a micelle-forming agent, and (c) a biodegradable and biocompatible oil, said antigen formulation being formulated as a stable oil-in-water emulsion, said antigen formulation lacking immunostimulating peptides and wherein said composition upon administration to an animal selected from the group consisting of humans, domesticated animals and agricultural animals is capable of inducing a specific **cytotoxic** T-lymphocyte response against the antigen contained in the composition.

4. The composition of claim 3, wherein said antigen formulation consists essentially of said detergent, agent, and oil.

5. The composition of claim 3, wherein said antigen formulation is non-toxic to said human or domesticated or agricultural animal.

6. The composition of claim 3, wherein said antigen is chosen from the **HIV** antigens: gp160, gag, pol, Nef, Tat, and **Rev**; the malaria antigens: CS protein and Sporozoite surface protein 2; the Hepatitis B surface antigens: Pre-S1, Pre-S2, HBc Ag, and HBe Ag; the influenza antigens: HA, NP and NA; Hepatitis A surface antigens; the Herpes virus antigens: EBV gp340, EBV gp85, HSV gB, HSV gD, HSV gH, HSV early protein product, cytomegalovirus gB, cytomegalovirus gH, and IE protein gP72; the respiratory syncytial virus antigens: F protein, G protein, and N - protein; and the tumor antigens: carcinoma CEA, carcinoma associated mucin, carcinoma P21, carcinoma P53, melanoma MPG, melanoma p97, carcinoma Neu oncogene product, carcinoma p53 gene product, a human papillomavirus antigen, the prostate specific antigen (PSA) and mutated p21 ras protein.

7. The composition of claim 1 wherein the stabilizing detergent is selected from the group consisting of polysorbate 80, Tween 20, Tween 40, Tween 60, Zwittergent 3-12, Teepol HB7 and Span 85.

8. The composition of claim 1 wherein said detergent is provided in an amount ranging from approximately 0.05 to 0.5%.

9. The composition of claim 8 wherein said amount of detergent is about 0.2%.

10. The composition of claim 1 wherein said micelle-forming agent comprises a hydrophile-lipophile balance of between 0 and 2.

11. The composition of claim 1 wherein said micelle-forming agent is selected from the group consisting of poloxamer 401, Pluronic L62LF, Pluronic L101, Pluronic L64, PEG1000, Tetronic 1501, Tetronic 150R1, Tetronic 701, Tetronic 901, Tetronic 1301, and Tetronic 130R1.

12. The composition of claim 1 wherein the amount of said micelle-forming agent ranges from between 0.5 to 10%.

13. The composition of claim 12 wherein the amount of said micelle-forming agent ranges from between 1.25 and 5%.

14. The composition of claim 1 wherein the oil exhibits a melting temperature less than 60° C.

15. The composition of claim 14 wherein the oil is selected from the group consisting of squalene, squalane, eicosane, tetratetracontane, pristane, glycerol, and vegetable oils.

16. The composition of claim 1 wherein the amount of the oil ranges from between 1 and 10%.

17. The composition of claim 16 wherein the amount of the oil ranges from between 2.5 and 5%.

18. The composition of claim 1 which comprises less than 20 micrograms of muramyl dipeptide.

19. The composition of claim 18 does not comprise any muramyl dipeptide.

20. The composition of claim 1 wherein the detergent is polysorbate 80, and the micelle-forming agent is poloxamer 401.

21. The composition of claim 20 wherein the oil is squalane.

22. The composition of claim 1 wherein the detergent is selected from the group consisting of Tween 20, Tween 40 and Tween 80; the oil is selected from the group consisting of squalane, eicosane, and pristane and the micelle-forming agent is selected from the group consisting of Pluronic L62LF and polyoxamer 401.

23. The composition of claim 1 wherein the particle sizes in the composition range from 250 to 300 nm.

```
=> d his

     (FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

     FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
                E SIA CHARLES/IN
L1           16 S E3-E5
                E KLEIN MICHEL/IN
L2          177 S E3-E5
L3           47 S L2 AND (T-HELPER)
L4            2 S L3 AND (T-HELPER/CLM)

     FILE 'WPIDS' ENTERED AT 16:13:39 ON 06 SEP 2005
                E SIA CHARLES/IN
                E SIA C D Y/IN
L5           19 S E1 OR E3
                E KLEIN M/IN
L6          264 S E3
L7            4 S L6 AND (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L8            4 S L7 NOT L5

     FILE 'MEDLINE' ENTERED AT 16:19:14 ON 06 SEP 2005
                E SIA C D Y/AU
L9           19 S E1 OR E8

     FILE 'USPATFULL' ENTERED AT 16:20:38 ON 06 SEP 2005
L10       40963 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L11       13497 S L10 AND (T-HELPER OR CD4?)
L12        3031 S L11 AND (T-HELPER)
L13         943 S L12 AND AY<2000
L14          45 S L13 AND (T-HELPER/CLM)
L15       18902 S L10 AND REV
L16        2167 S L15 AND (CTL OR CTL EPITOPE?)
L17        1836 S L16 AND (EPITOPE?)
L18         352 S L17 AND (CTL/CLM OR CYTOTOXIC/CLM)
L19          84 S L18 AND AY<2000
L20          10 S L19 AND REV/CLM

=> file medline
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                              65.72     340.01

FILE 'MEDLINE' ENTERED AT 16:35:30 ON 06 SEP 2005

 FILE LAST UPDATED: 3 SEP 2005 (20050903/UP).  FILE COVERS 1950 TO DATE.

 On December 19, 2004, the 2005 MeSH terms were loaded.

 The MEDLINE reload for 2005 is now available.  For details enter HELP
 RLOAD at an arrow promt (=>).  See also:
```

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> file uspatful
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.38     340.39

FILE 'USPATFULL' ENTERED AT 16:35:51 ON 06 SEP 2005
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 6 Sep 2005 (20050906/PD)
FILE LAST UPDATED: 6 Sep 2005 (20050906/ED)
HIGHEST GRANTED PATENT NUMBER: US6941576
HIGHEST APPLICATION PUBLICATION NUMBER: US2005193458
CA INDEXING IS CURRENT THROUGH 6 Sep 2005 (20050906/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 6 Sep 2005 (20050906/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

>>>  USPAT2 is now available.  USPATFULL contains full text of the     <<<
>>>  original, i.e., the earliest published granted patents or         <<<
>>>  applications.  USPAT2 contains full text of the latest US         <<<
>>>  publications, starting in 2001, for the inventions covered in     <<<
>>>  USPATFULL.  A USPATFULL record contains not only the original     <<<
>>>  published document but also a list of any subsequent              <<<
>>>  publications.  The publication number, patent kind code, and      <<<
>>>  publication date for all the US publications for an invention     <<<
>>>  are displayed in the PI (Patent Information) field of USPATFULL   <<<
>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                         <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together        <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to          <<<
>>>  enter this cluster.                                               <<<
>>>                                                                    <<<
>>>  Use USPATALL when searching terms such as patent assignees,       <<<
>>>  classifications, or claims, that may potentially change from      <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s (hepatitis B virus or HBV)
         31511 HEPATITIS
       2156576 B
         91252 VIRUS
          9208 HEPATITIS B VIRUS
                 (HEPATITIS(W)B(W)VIRUS)
          4618 HBV
L21      10942 (HEPATITIS B VIRUS OR HBV)

=> s l21 and (nucleocapsid)
          2324 NUCLEOCAPSID
L22        859 L21 AND (NUCLEOCAPSID)

=> s l22 and (CTL or cytotoxic T lymphocyte?)
         10404 CTL
         37280 CYTOTOXIC
       1068740 T
         50255 LYMPHOCYTE?
          4832 CYTOTOXIC T LYMPHOCYTE?
                 (CYTOTOXIC(W)T(W)LYMPHOCYTE?)
L23        294 L22 AND (CTL OR CYTOTOXIC T LYMPHOCYTE?)

=> s l23 and CLP-243
          2095 CLP
        121939 243
             1 CLP-243
                 (CLP(W)243)
L24          0 L23 AND CLP-243
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=> s l23 and ay<2000
      3003849 AY<2000
L25         99 L23 AND AY<2000

=> d l25,ti,1-99

L25  ANSWER 1 OF 99  USPATFULL on STN
TI     Recombinant negative strand RNA virus expression systems and vaccines

L25  ANSWER 2 OF 99  USPATFULL on STN
TI     Microparticles with adsorbent surfaces, methods of making same, and uses
       thereof

L25  ANSWER 3 OF 99  USPATFULL on STN
TI     Nucleic acid constructs

L25  ANSWER 4 OF 99  USPATFULL on STN
TI     Methods for administration of recombinant gene delivery vehicles for
       treatment of hemophilia and other disorders

L25  ANSWER 5 OF 99  USPATFULL on STN
TI     Methods for vaccination and vaccines therefor

L25  ANSWER 6 OF 99  USPATFULL on STN
TI     Immunodominant human T-cell epitopes of hepatitis C virus

L25  ANSWER 7 OF 99  USPATFULL on STN
TI     Inducing cellular immune responses to hepatitis B virus using
       peptide and nucleic acid compositions

L25  ANSWER 8 OF 99  USPATFULL on STN
TI     Modified HCV peptide vaccines

L25  ANSWER 9 OF 99  USPATFULL on STN
TI     Attenuated negative strand viruses with altered interferon antagonist
       activity for use as vaccines and pharmaceuticals

L25  ANSWER 10 OF 99  USPATFULL on STN
TI     Methods for enhancement of protective immune responses

L25  ANSWER 11 OF 99  USPATFULL on STN
TI     Immunodominant human T-cell epitopes of hepatitis C virus

L25  ANSWER 12 OF 99  USPATFULL on STN
TI     Peptides for inducing cytotoxic T lymphocyte responses to
       hepatitus B virus

L25  ANSWER 13 OF 99  USPATFULL on STN
TI     Methods and interferon deficient substrates for the propagation of
       viruses

L25  ANSWER 14 OF 99  USPATFULL on STN
TI     IMMUNOLOGICAL PROCESS AND CONSTRUCTS FOR INCREASING THE HDL CHOLESTEROL
       CONCENTRATION BY DNA VACCINATION

L25  ANSWER 15 OF 99  USPATFULL on STN
TI     Immunodominant human T-cell epitopes of hepatitis C virus

L25  ANSWER 16 OF 99  USPATFULL on STN
TI     SYNTHETIC HEPATITIS C GENES

L25  ANSWER 17 OF 99  USPATFULL on STN
TI     Lentiviral vectors

L25  ANSWER 18 OF 99  USPATFULL on STN
TI     ANTIGEN LIBRARY IMMUNIZATION

L25  ANSWER 19 OF 99  USPATFULL on STN
TI     COMPOSITIONS AND METHODS FOR TREATING INTRACELLULAR DISEASES

L25  ANSWER 20 OF 99  USPATFULL on STN
TI     Genetic immunization

L25  ANSWER 21 OF 99  USPATFULL on STN
TI     Recombinant alphavirus-based vectors with reduced inhibition of cellular
       macromolecular synthesis

L25  ANSWER 22 OF 99  USPATFULL on STN
```

TI Recombinant alphavirus-based vectors with reduced inhibition of cellular macromolecular synthesis

L25 ANSWER 23 OF 99 USPATFULL on STN
TI Recombinant alphavirus-based vectors with reduced inhibition of cellular macromolecular synthesis

L25 ANSWER 24 OF 99 USPATFULL on STN
TI FORMULATED NUCLEIC ACID COMPOSITIONS AND METHODS OF ADMINISTERING THE SAME FOR GENE THERAPY

L25 ANSWER 25 OF 99 USPATFULL on STN
TI FUNCTIONAL DNA CLONE FOR HEPATITIS C VIRUS (HCV) AND USES THEREOF

L25 ANSWER 26 OF 99 USPATFULL on STN
TI Alphavirus structural protein expression cassettes

L25 ANSWER 27 OF 99 USPATFULL on STN
TI HERPEVIRUS REPLICATION DEFECTIVE MUTANTS

L25 ANSWER 28 OF 99 USPATFULL on STN
TI NON-IMMUNOGENIC PRODRUGS AND SELECTABLE MARKERS FOR USE IN GENE THERAPY

L25 ANSWER 29 OF 99 USPATFULL on STN
TI Functional DNA clone for hepatitis C virus (HCV) and uses thereof

L25 ANSWER 30 OF 99 USPATFULL on STN
TI Recombinant alphavirus-based vectors with reduced inhibition of cellular macromolecular synthesis

L25 ANSWER 31 OF 99 USPATFULL on STN
TI Synthesis and purification of hepatitis C virus-like particles

L25 ANSWER 32 OF 99 USPATFULL on STN
TI Recombinant vaccines comprising immunogenic attenuated bacteria having RPOS positive phenotype

L25 ANSWER 33 OF 99 USPATFULL on STN
TI FELINE IMMUNODEFICIENCY VIRUS GENE THERAPY VECTORS

L25 ANSWER 34 OF 99 USPATFULL on STN
TI Recombinant alphavirus particles

L25 ANSWER 35 OF 99 USPATFULL on STN
TI Guanosine-rich oligonucleotide integrase inhibitors

L25 ANSWER 36 OF 99 USPATFULL on STN
TI Method of modulating an immune response in an infected mammal by transmucosal administration of modulating agent

L25 ANSWER 37 OF 99 USPATFULL on STN
TI Nucleic acid immunization using a virus-based infection/transfection system

L25 ANSWER 38 OF 99 USPATFULL on STN
TI ATTENUATED MICROORGANISM STRAINS EXPRESSING HPV PROTEINS

L25 ANSWER 39 OF 99 USPATFULL on STN
TI Eukaryotic layered vector initiation systems for production of recombinant proteins

L25 ANSWER 40 OF 99 USPATFULL on STN
TI Superantigen based methods and compositions for treatment of diseases

L25 ANSWER 41 OF 99 USPATFULL on STN
TI Vectors and methods for immunization or therapeutic protocols

L25 ANSWER 42 OF 99 USPATFULL on STN
TI Anti-viral guanosine-rich oligonucleotides and method of treating HIV

L25 ANSWER 43 OF 99 USPATFULL on STN
TI HLA-restricted **hepatitis B virus CTL** epitopes

L25 ANSWER 44 OF 99 USPATFULL on STN
TI Hepatitis therapeutics

L25 ANSWER 45 OF 99 USPATFULL on STN
TI Methods for the detection of a novel hepatitis C virus (HCV) terminal 3' noncoding region

L25 ANSWER 46 OF 99 USPATFULL on STN
TI Anti-viral guanosine-rich tetrad forming oligonucleotides

L25 ANSWER 47 OF 99 USPATFULL on STN
TI Method of making microencapsulated DNA for vaccination and gene therapy

L25 ANSWER 48 OF 99 USPATFULL on STN
TI Attenuated microorganism strains and their uses

L25 ANSWER 49 OF 99 USPATFULL on STN
TI Peptides for inducing **cytotoxic T lymphocyte** responses to **hepatitis B virus**

L25 ANSWER 50 OF 99 USPATFULL on STN
TI Plasmids encoding immunogenic proteins and intracellular targeting sequences

L25 ANSWER 51 OF 99 USPATFULL on STN
TI Synthetic peptides for rubella vaccine

L25 ANSWER 52 OF 99 USPATFULL on STN
TI Recombinant nodavirus compositions and methods

L25 ANSWER 53 OF 99 USPATFULL on STN
TI Diagnosis of, and vaccination against, a positive stranded RNA virus using an isolated, unprocessed polypeptide encoded by a substantially complete genome of such virus

L25 ANSWER 54 OF 99 USPATFULL on STN
TI Recombinant new castle disease virus RNA expression systems and vaccines

L25 ANSWER 55 OF 99 USPATFULL on STN
TI Antibodies specific for TRP-2 a human tumor antigen recognized by **cytotoxic T lymphocytes**

L25 ANSWER 56 OF 99 USPATFULL on STN
TI Functional DNA clone for hepatitis C virus (HCV) and uses thereof

L25 ANSWER 57 OF 99 USPATFULL on STN
TI Chimeric Gag pseudovirions

L25 ANSWER 58 OF 99 USPATFULL on STN
TI Use of microparticles combined with submicron oil-in-water emulsions

L25 ANSWER 59 OF 99 USPATFULL on STN
TI Identification of TRP-2 as a human tumor antigen recognized by **cytotoxic T lymphocytes**

L25 ANSWER 60 OF 99 USPATFULL on STN
TI Synthetic peptides for a rubella vaccine

L25 ANSWER 61 OF 99 USPATFULL on STN
TI Chimeric hepatitis B/hepatitis C virus vaccine

L25 ANSWER 62 OF 99 USPATFULL on STN
TI Method for stimulating an immune response utilizing recombinant alphavirus particles

L25 ANSWER 63 OF 99 USPATFULL on STN
TI Eukaryotic layered vector initiation systems

L25 ANSWER 64 OF 99 USPATFULL on STN
TI Methods for enhancement of protective immune responses

L25 ANSWER 65 OF 99 USPATFULL on STN
TI Recombinant negative strand RNA viruses

L25 ANSWER 66 OF 99 USPATFULL on STN
TI Compositions and methods for delivery of genetic material

L25 ANSWER 67 OF 99 USPATFULL on STN
TI Viral defective interfering particles and uses thereof

L25 ANSWER 68 OF 99 USPATFULL on STN
TI Identification of peptides that stimulate hepatitis C virus specific cytotoxic T cells

L25 ANSWER 69 OF 99 USPATFULL on STN

TI Peptides for inducing **cytotoxic T lymphocyte** responses to **hepatitis B virus**

L25 ANSWER 70 OF 99 USPATFULL on STN
TI **Hepatitis B virus** mutants, reagents and methods for detection

L25 ANSWER 71 OF 99 USPATFULL on STN
TI Methods for enhancement of protective immune responses

L25 ANSWER 72 OF 99 USPATFULL on STN
TI Methods for enhancement of protective immune responses

L25 ANSWER 73 OF 99 USPATFULL on STN
TI Nucleic acids comprising a highly conserved novel 3 terminal sequence element of the hepatitis C virus

L25 ANSWER 74 OF 99 USPATFULL on STN
TI Recombinant vaccines to break self-tolerance

L25 ANSWER 75 OF 99 USPATFULL on STN
TI Recombinant negative strand RNA virus expression systems and vaccines

L25 ANSWER 76 OF 99 USPATFULL on STN
TI Alphavirus vector constructs

L25 ANSWER 77 OF 99 USPATFULL on STN
TI Recombinant negative strand RNA virus expression systems

L25 ANSWER 78 OF 99 USPATFULL on STN
TI Peptides for inducing **cytotoxic T lymphocyte** responses to **hepatitis B virus**

L25 ANSWER 79 OF 99 USPATFULL on STN
TI Identification of TRP-2 as a human tumor antigen recognized by **cytotoxic T lymphocytes**

L25 ANSWER 80 OF 99 USPATFULL on STN
TI Genetic immunization

L25 ANSWER 81 OF 99 USPATFULL on STN
TI Yeast-based delivery vehicles

L25 ANSWER 82 OF 99 USPATFULL on STN
TI Recombinant negative strand RNA virus expression systems and vaccines

L25 ANSWER 83 OF 99 USPATFULL on STN
TI Genetic immunization

L25 ANSWER 84 OF 99 USPATFULL on STN
TI Eukaryotic layered vector initiation systems

L25 ANSWER 85 OF 99 USPATFULL on STN
TI Alphavirus structural protein expression cassettes

L25 ANSWER 86 OF 99 USPATFULL on STN
TI Peptides for inducing **cytotoxic T lymphocyte** responses **hepatitis B virus**

L25 ANSWER 87 OF 99 USPATFULL on STN
TI Recombinant negative strand RNA virus expression systems and vaccines

L25 ANSWER 88 OF 99 USPATFULL on STN
TI Aptamers specific for biomolecules and methods of making

L25 ANSWER 89 OF 99 USPATFULL on STN
TI Anti-HIV /Aids Chemo(C)-, immuno(I)-, or ci-therapy using tur (or related compounds) and/or NVA (or EPV)

L25 ANSWER 90 OF 99 USPATFULL on STN
TI Alteration of immune response using pan DR-binding peptides

L25 ANSWER 91 OF 99 USPATFULL on STN
TI Methods and compositions for inhibiting production of replication competent virus

L25 ANSWER 92 OF 99 USPATFULL on STN
TI **Hepatitis B virus** mutants, reagents and methods for detection

L25 ANSWER 93 OF 99 USPATFULL on STN
TI Genetic immunization

L25 ANSWER 94 OF 99 USPATFULL on STN
TI **Hepatitis B virus** mutants, reagents and methods for detection

L25 ANSWER 95 OF 99 USPATFULL on STN
TI **Hepatitis B Virus** mutants, reagents and methods for detection

L25 ANSWER 96 OF 99 USPATFULL on STN
TI Recombinant negative strand RNA virus

L25 ANSWER 97 OF 99 USPATFULL on STN
TI Recombinant negative strand RNA virus expression-systems

L25 ANSWER 98 OF 99 USPATFULL on STN
TI T cell epitopes of the **hepatitis B virus nucleocapsid** protein

L25 ANSWER 99 OF 99 USPATFULL on STN
TI T cell epitopes of the **hepatitis B virus nucleocapsid** protein

=> d 125,cbib,clm,98,99

L25 ANSWER 98 OF 99 USPATFULL on STN
92:72280 T cell epitopes of the **hepatitis B virus nucleocapsid** protein.
Thornton, George B., San Diego, CA, United States
Moriarty, Ann M., San Diego, CA, United States
Milich, David R., San Diego, CA, United States
McLachlan, Alan, San Diego, CA, United States
The Scripps Research Institute, La Jolla, CA, United States (U.S. corporation)
US 5143726 19920901
APPLICATION: US 1989-439099 19891120 (7) <--
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:

1. An immunogenic fusion protein comprising a polypeptide immunogen consisting essentially of about 10 to about 30 amino acid residues operatively linked by a peptide bond to an amino-terminal flanking sequence and a carboxy-terminal flanking sequence, said amino-terminal flanking sequence consisting essentially of about 10 to about 20 amino acid residues having an amino acid residue sequence corresponding in sequence to a portion of **HBV** core protein from about position 1 to about position 35 and said carboxy-terminal flanking sequence consisting essentially of about 120 to about 160 amino acid residues having an amino acid residue sequence corresponding in sequence to a portion of **HBV** core protein from bout position 10 to about position 183.

2. An immunogenic fusion protein comprising a polypeptide immunogen consisting essentially of about 10 to about 30 amino acid residues operatively linked by a peptide bond to an amino-terminal flanking sequence and a carboxy-terminal flanking sequence, said amino-terminal flanking sequence consisting essentially of about 70 to about 90 amino acid residues having an amino acid residue sequence corresponding in sequence to a portion of **HBV** core protein from about position 1 to about position 90 and said carboxy-terminal flanking sequence consisting essentially of about 65 to about 85 amino acid residues having an amino acid residue sequence corresponding in sequence to a portion of **HBV** core protein from about position 80 to about position 183.

3. A T cell stimulating polypeptide consisting essentially of about 15 to about 70 amino acid residues having a sequence corresponding in sequence to a portion of the amino acid residue sequence of **HBV** core protein from about position 70 to about position 140 from the amino terminus thereof.

4. A composite polypeptide immunogen comprising at least 20 amino acid residues that includes a T cell stimulating polypeptide consisting essentially of about 15 to about 70 amino acid residues having a sequence corresponding in sequence to a portion of the amino acid residue sequence of HBcAg from about position 70 to about position 140 from the amino acid terminus thereof operatively linked to a polypeptide immunogen.

5. A method of enhancing the immunogenicity of a polypeptide immunogen comprising operatively linking to said polypeptide immunogen a T cell stimulating polypeptide consisting essentially of about 15 to about 70 amino acid residues having a sequence corresponding in sequence to a portion of the amino acid residue sequence of HBcAg from about position 70 to about position 140 from the amino terminus thereof.

L25 ANSWER 99 OF 99 USPATFULL on STN
89:93986 T cell epitopes of the **hepatitis B virus nucleocapsid** protein.
Thornton, George B., San Diego, CA, United States
Moriarty, Ann M., San Diego, CA, United States
Milich, David R., San Diego, CA, United States
McLachlan, Alan, San Diego, CA, United States
Scripps Clinic and Research Foundation, La Jolla, CA, United States (U.S. corporation)
US 4882145 19891121
APPLICATION: US 1987-106538 19871007 (7) <--
DOCUMENT TYPE: Utility; Granted.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
CLM What is claimed is:
1. A T cell stimulating polypeptide consisting essentially of an amino acid residue sequence corresponding to a formula selected from the group consisting of: (a) MDIDPYKEFGATVELLSFLP, (b) RDLLDT.ASALYREALESPEHCSPHH, (c) TWVGVNLEDPASRDLVVSYVNTNMG, (d) VVSYVNTNMGLKFRQL, (e) VVSYVNTNMGLK, (f) LLWFHISCLTFGRETVIEYLV, (g) LLWFHISCLTF, (h) VSFGVWIRTPPAYRPPNAPIL, (i) VSFGVWIRTPPA, (j) PPAYRPPNAPIL, and (k) WIRTPPAYRPPN.

2. A method of enhancing the immunogenicity of a polypeptide immunogen comprising operatively linking by a peptide bond to said polypeptide immunogen a T cell stimulating polypeptide having an amino acid residue sequence represented by a formula selected from the group consisting of: (a) MDIDPYKEFGATVELLSFLP, (b) RDLLDTASALYREALESPEHCSPHH, (c) TWVGVNLEDPASRDLVVSYVNTNMG, (d) VVSYVNTNMGLKFRQL, (e) VVSYVNTNMGLK, (f) LLWFHISCLTFGRETVIEYLV, (g) LLWFHISCLTF, (h) VSFGVWIRTPPAYRPPNAPIL, (i) VSFGVWIRTPPA, (j) PPAYRPPNAPIL, and (k) WIRTPPAYRPPN.

=> d

L25 ANSWER 1 OF 99 USPATFULL on STN
Full Text
AN 2005:107278 USPATFULL
TI Recombinant negative strand RNA virus expression systems and vaccines
IN Palese, Peter, Leonia, NJ, UNITED STATES
Garcia-Sastre, Adolfo, New York, NY, UNITED STATES
PA MedImmune Vaccines, Inc., Mountain View, CA, UNITED STATES (U.S. corporation)
PI US 6887699 B1 20050503
AI US 1999-396539 19990914 (9) <--
RLI Continuation of Ser. No. US 1998-106377, filed on 29 Jun 1998, Pat. No. US 6001634 Division of Ser. No. US 1994-252508, filed on 1 Jun 1994, Pat. No. US 5854037 Continuation-in-part of Ser. No. US 1994-190698, filed on 1 Feb 1994, ABANDONED Continuation of Ser. No. US 1992-925061, filed on 4 Aug 1992, ABANDONED Division of Ser. No. US 1990-527237, filed on 22 May 1990, Pat. No. US 5166057
DT Utility
FS GRANTED
LN.CNT 3658
INCL INCLM: 435/239.000
NCL NCLM: 435/239.000
IC [7]
ICM: C12N007-02
EXF 435/235.1; 435/239; 435/320.1
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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(FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
E SIA CHARLES/IN
L1 16 S E3-E5
E KLEIN MICHEL/IN
L2 177 S E3-E5
L3 47 S L2 AND (T-HELPER)
L4 2 S L3 AND (T-HELPER/CLM)

FILE 'WPIDS' ENTERED AT 16:13:39 ON 06 SEP 2005
E SIA CHARLES/IN
E SIA C D Y/IN
L5 19 S E1 OR E3
E KLEIN M/IN

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L6          264 S E3
L7            4 S L6 AND (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L8            4 S L7 NOT L5

     FILE 'MEDLINE' ENTERED AT 16:19:14 ON 06 SEP 2005
                E SIA C D Y/AU
L9           19 S E1 OR E8

     FILE 'USPATFULL' ENTERED AT 16:20:38 ON 06 SEP 2005
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L11       13497 S L10 AND (T-HELPER OR CD4?)
L12        3031 S L11 AND (T-HELPER)
L13         943 S L12 AND AY<2000
L14          45 S L13 AND (T-HELPER/CLM)
L15       18902 S L10 AND REV
L16        2167 S L15 AND (CTL OR CTL EPITOPE?)
L17        1836 S L16 AND (EPITOPE?)
L18         352 S L17 AND (CTL/CLM OR CYTOTOXIC/CLM)
L19          84 S L18 AND AY<2000
L20          10 S L19 AND REV/CLM

     FILE 'MEDLINE' ENTERED AT 16:35:30 ON 06 SEP 2005

     FILE 'USPATFULL' ENTERED AT 16:35:51 ON 06 SEP 2005
L21       10942 S (HEPATITIS B VIRUS OR HBV)
L22         859 S L21 AND (NUCLEOCAPSID)
L23         294 S L22 AND (CTL OR CYTOTOXIC T LYMPHOCYTE?)
L24           0 S L23 AND CLP-243
L25          99 S L23 AND AY<2000

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COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                              17.40     357.79

FILE 'MEDLINE' ENTERED AT 16:41:11 ON 06 SEP 2005

 FILE LAST UPDATED: 3 SEP 2005 (20050903/UP).  FILE COVERS 1950 TO DATE.

 On December 19, 2004, the 2005 MeSH terms were loaded.

 The MEDLINE reload for 2005 is now available.  For details enter HELP
 RLOAD at an arrow promt (=>).  See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

 OLDMEDLINE now back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2005 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

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        119541 IMMUNODEFICIENCY
        399181 VIRUS
         46646 HUMAN IMMUNODEFICIENCY VIRUS
                 (HUMAN(W)IMMUNODEFICIENCY(W)VIRUS)
L26     155962 (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)

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          5197 REV
L27       1451 L26 AND REV

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L28         58 L27 AND EPITOPE?

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         88635 CYTOTOXIC
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L30 12 L29 AND PY<2000

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L30 ANSWER 1 OF 12 MEDLINE on STN
1999370046. PubMed ID: 10438897. Immune responses in asymptomatic **HIV**-1-infected patients after **HIV**-DNA immunization followed by highly active antiretroviral treatment. Calarota S A; Leandersson A C; Bratt G; Hinkula J; Klinman D M; Weinhold K J; Sandstrom E; Wahren B. (Swedish Institute for Infectious Disease Control, Microbiology, Tumorbiology Center, Karolinska Institute, Stockholm.) Journal of immunology (Baltimore, Md. : 1950), **(1999 Aug 15)** 163 (4) 2330-8. Journal code: 2985117R. ISSN: 0022-1767. Pub. country: United States. Language: English.
AB Intensive chemotherapy is capable of reducing the viral load in **HIV**-1-infected individuals while infected cells are still present. A special property of DNA immunization is to induce both new **CTL** and Ab responses. We evaluated the possibility of inducing new immune responses in already infected individuals by means of DNA constructs encoding the nef, **rev**, or tat regulatory **HIV**-1 genes. Significant changes in viral loads and CD4+ counts were observed in four patients who started highly active antiretroviral treatment (HAART) during the immunization study. The DNA immunization induced Ag-specific T cell proliferation, which persisted up to 9 mo after the last DNA injection, and cytolytic activities but did not, by itself, reduce viral load. Increased levels of **CTL** precursor cells were induced in all nine DNA-immunized patients. The profile of IFN-gamma secretion observed when human PBMC were transfected with the nef, **rev**, and tat DNA resembled that found in the **CTL** activity (nef > tat > **rev**). Ab responses that occurred after immunizations were of a low magnitude. In accordance with the high IL-6 production induced by the nef DNA plasmid, IgG titers were highest in patients immunized with nef DNA. The initiation of HAART appears to contribute to the induction of new **HIV**-specific **CTL** responses, but by itself did not cause obvious re-induction of these activities.

L30 ANSWER 2 OF 12 MEDLINE on STN
1999360933. PubMed ID: 10433551. Genetic live vaccines mimic the antigenicity but not pathogenicity of live viruses. Sykes K F; Johnston S A. (Center for Biomedical Inventions, Department of Internal Medicine, The University Texas-Southwestern Medical Center, Dallas 75235-8573, USA.. sykes@ryburn.swmed.edu) . DNA and cell biology, **(1999 Jul)** 18 (7) 521-31. Journal code: 9004522. ISSN: 1044-5498. Pub. country: United States. Language: English.
AB The development of an effective **HIV** vaccine is both a pressing and a formidable problem. The most encouraging results to date have been achieved using live-attenuated immunodeficiency viruses. However, the frequency of pathogenic breakthroughs has been a deterrent to their development. We suggest that expression libraries generated from viral DNA can produce the immunologic advantages of live vaccines without risk of reversion to pathogenic viruses. The plasmid libraries could be deconvoluted into useful components or administered as complex mixtures. To explore this approach, we designed and tested several of these genetic live vaccines (GLVs) for **HIV**. We constructed libraries by cloning overlapping fragments of the proviral genome into mammalian expression plasmids, then used them to immunize mice. We found that inserting library fragments into a vector downstream of a secretory gene sequence led to augmented antibody responses, and insertion downstream of a ubiquitin sequence enhanced **cytotoxic** lymphocyte responses. Also, fragmentation of gag into subgenes broadened T-cell **epitope** recognition. We have fragmented the genome by sequence-directed and random methods to create libraries with different features. We propose that the characteristics of GLVs support their further investigation as an approach to protection against **HIV** and other viral pathogens.

L30 ANSWER 3 OF 12 MEDLINE on STN
1999284280. PubMed ID: 10357388. **Cytotoxic** T lymphocyte recognition of HLA-B*5101-restricted **HIV**-1 **Rev epitope** which is naturally processed in **HIV**-1-infected cells. Tomiyama H; Chujoh Y; Shioda T; Miwa K; Oka S; Kaneko Y; Takiguchi M. AIDS (London, England), **(1999 May 7)** 13 (7) 861-3. Journal code: 8710219. ISSN: 0269-9370. Pub. country: ENGLAND: United Kingdom. Language: English.

L30 ANSWER 4 OF 12 MEDLINE on STN
1999203068. PubMed ID: 10189185. **Cytotoxic** T-lymphocyte responses to **HIV**-1 reverse transcriptase (review). Menendez-Arias L; Mas A; Domingo E. (Centro de Biologia Molecular "Severo Ochoa", CSIC-Universidad Autonoma de Madrid, Cantoblanco, Spain.) Viral immunology, **(1998)** 11 (4) 167-81. Ref: 81. Journal code: 8801552. ISSN: 0882-8245. Pub. country: United States. Language: English.
AB **Cytotoxic** T lymphocytes (**CTL**) play an important role in the control of

human immunodeficiency virus (**HIV**) infection. **CTL** responses have been demonstrated for most of the **HIV** gene products, predominantly gag, pol, and env-encoded proteins, and also for the regulatory proteins Nef, Tat, Vif, or **Rev**. The **HIV**-1 reverse transcriptase (RT), which derives from expression of the pol gene, is an important target of cellular immune responses in infected individuals. More than 40 different peptides containing RT-specific **CTL epitopes** have been identified. The most conserved and frequently detected are located in the 'fingers' and 'palm' subdomains of the enzyme, but other **epitopes** have been found in the 'thumb' and 'connection' subdomains as well as in the RNase H domain. Studies on the sequence variability and functional role of amino acids forming **CTL epitopes** are relevant for addressing important questions relative to viral escape from immmune control and the future design of anti-AIDS vaccines.

L30 ANSWER 5 OF 12 MEDLINE on STN

1999163521. PubMed ID: 10065638. **HIV**-1 DNA vaccines. Fomsgaard A. (Department of Virology, Statens Serum Institut, Copenhagen, Denmark.. afo@ssi.dk) . Immunology letters, **(1999 Jan)** 65 (1-2) 127-31. Ref: 36. Journal code: 7910006. ISSN: 0165-2478. Pub. country: Netherlands. Language: English.

AB **HIV**-1 was among the original DNA vaccine targets and **HIV** DNA vaccines are now in human trials. Lack of strong correlates of protective immunity makes vaccine design difficult; however, DNA vaccines have the potential to be an ideal vaccine and therapeutic approach against **HIV**-1. DNA vaccines induce conformational-dependent antibodies, mimic live vaccines but without the pathogenic potential, and can easily be made polyvalent. Genes which encode important **CTL** and antibody **epitopes** can be included while those that confer pathogenicity, virulence, antibody enhancement or represent non-conserved **epitopes** can be excluded. In our hands pre-treatment of muscles with bupivacaine or cardiotoxin did not offer any advantage over no muscle pre-treatment or gene gun inoculation of skin although gene gun immunization seem to favour a Th2 type response. As DNA vaccine candidates we have compared vaccines encoding native **HIV** MN gp160 with **Rev**-independent synthetic genes encoding MNgp160 and MNgp120 using mammalian high expression codons. In these experiments the gene encoding secreted gp120 gave highest antibody neutralizing titers. High and fast antibody responses could also be obtained by transferring the **HIV**-1 MN V3 loop to the secreted HBsAg as a fusion gene vaccine. Thus, in the case of **HIV**-1 MN genes encoding secreted surface glycoproteins may be preferred instead of membrane bound envelopes. **CTL** responses were induced in all cases. However, in order to meet the high diversity of **HIV** and HLA types our approach is to include many **CTL epitopes** in a multivalent minigene vaccine. We found that gene gun DNA vaccination with minimal **epitopes** could induce specific **CTL**. Flanking sequences influenced the **CTL** response but was not needed. DNA vaccines encoding known and computer predicted **CTL epitopes** are now being developed.

L30 ANSWER 6 OF 12 MEDLINE on STN

1998325206. PubMed ID: 9658134. Kinetics of antiviral activity by **human immunodeficiency virus** type 1-specific **cytotoxic** T lymphocytes (**CTL**) and rapid selection of **CTL** escape virus in vitro. Van Baalen C A; Schutten M; Huisman R C; Boers P H; Gruters R A; Osterhaus A D. (Institute of Virology, Erasmus University, Rotterdam, The Netherlands.) Journal of virology, **(1998 Aug)** 72 (8) 6851-7. Journal code: 0113724. ISSN: 0022-538X. Pub. country: United States. Language: English.

AB The antiviral activity of a CD8(+) **cytotoxic** T-lymphocyte (**CTL**) clone (TCC108) directed against a newly identified HLA-B14-restricted **epitope**, **human immunodeficiency virus** type 1 (**HIV**-1) **Rev**(67-75) SAEPVPLQL, was analyzed with respect to its kinetics of target cell lysis and inhibition of **HIV**-1 production. Addition of TCC108 cells or CD8(+) reverse transcriptase-specific CTLs to HLA-matched CD4(+) T cells at different times after infection with **HIV**-1 IIIB showed that infected cells became susceptible to **CTL**-mediated lysis before peak virus production but after the onset of progeny virus release. When either of these CTLs were added to part of the infected cells immediately after infection, p55 expression and virus production were significantly suppressed. These data support a model in which CTLs, apart from exerting cytolytic activity which may prevent continued virus release, can interfere with viral protein expression during the eclipse phase via noncytolytic mechanisms. TCC108-mediated inhibition of virus replication in peripheral blood mononuclear cells caused rapid selection of a virus with a mutation (69E-->K) in the **Rev**(67-75) **CTL epitope** which abolished recognition by TCC108 cells. Taken together, these data suggest that both cytolytic and noncytolytic antiviral mechanisms of CTLs can be specifically targeted to **HIV**-1-infected cells.

L30 ANSWER 7 OF 12 MEDLINE on STN

97229916. PubMed ID: 9075479. Recognition of a small number of diverse

epitopes dominates the **cytotoxic** T lymphocytes response to **HIV** type 1 in an infected individual. Lieberman J; Fabry J A; Fong D M; Parkerson G R 3rd. (Center for Blood Research, Harvard Medical School, Boston, Massachusetts 02111, USA.) AIDS research and human retroviruses, **(1997 Mar 20)** 13 (5) 383-92. Journal code: 8709376. ISSN: 0889-2229. Pub. country: United States. Language: English.

AB Mitogen-activated T cell lines may be reproducibly used to identify relatively conserved **HIV**-1 **epitopes** that dominate **CTL** recognition of **HIV**-infected cells. Using a combination of nested truncations of **HIV**-vaccinia recombinants encoding **HIV**-1LAI Env and overlapping peptides that span the coding regions of the **HIV**-1 SF2 subclone of env, gag, nef, **rev**, and tat, we have mapped the immunodominant, relatively conserved **CTL epitopes** recognized by 25 **HIV**-seropositive individuals with CD4 counts between 100 and 500/mm3 and no history of AIDS opportunistic infection. We could characterize at least 1 peptide **CTL epitope** recognized by the T cell lines of 18 of 25 of the subjects; the T cell lines from 2 additional subjects recognized **HIV**-vaccinia presenting targets, but no dominant peptide **epitope** was identified. **CTL epitopes** were most frequently encoded by gag (recognized by 16 of 25 patient T cell lines), followed by nef and env (11 of 25 each), and the RT region of pol (9 of 25). Tat and **Rev** were rarely the sites of **CTL epitopes**. The identified **epitopes** occurred predominantly in relatively conserved regions of **HIV**-1. The mean number of **HIV** peptides identified at a single time for each cell line was 2.7 +/- 1.7. Although no single peptide dominated **CTL** recognition in more than four individuals, clusters of **epitopes** were found in the N-terminal region of gp160 and in two central regions of Nef. The dominant **HIV**-1 **CTL epitopes** in infected patients were not predictable on the basis of MHC expression and varied widely in an MHC-diverse population.

L30 ANSWER 8 OF 12 MEDLINE on STN

97120475. PubMed ID: 8961146. Humoral and cellular immunities elicited by **HIV**-1 vaccination. Shiver J W; Davies M E; Perry H C; Freed D C; Liu M A. (Department of Virus and Cell Biology, Merck Research Laboratories, West Point, PA 19486, USA.) Journal of pharmaceutical sciences, **(1996 Dec)** 85 (12) 1317-24. Journal code: 2985195R. ISSN: 0022-3549. Pub. country: United States. Language: English.

AB Recently it has been shown that immunization with plasmid DNA encoding genes for viral or bacterial antigens can elicit both humoral and cellular immune responses in rodents and nonhuman primates. In this study, mice and nonhuman primates were vaccinated by intramuscular injection with plasmids that express either a secreted form of **HIV**-1 gp120 or **rev** proteins. Mice receiving the tPA-gp120 DNA developed antigen-specific antibody responses against recombinant gp120 protein and the V2 peptide neutralization **epitope** as determined by ELISA. Vaccinated mice also exhibited gp120-specific T cell responses, such as in vitro proliferation of splenocytes and MHC Class I-restricted **cytotoxic** T lymphocyte (**CTL**) activities, following antigen restimulation. In addition, supernatants from these lymphocyte cultures showed high levels of gamma-interferon production compared with IL-4, suggesting that primarily type 1-like helper T (Th1) lymphocyte responses were induced by both vaccines. Th1-like responses were also obtained for mice vaccinated with **rev** DNA. Immune responses induced by gp120 or **rev** vaccines were dose-dependent, boostable, and long-lived (> or = 6 months). Nonhuman primates vaccinated with tPA-gp120 DNA also showed antigen-specific T lymphocyte proliferative and humoral responses, including moderate levels of neutralizing sera against homologous **HIV**. These results suggest that plasmid DNA may provide a powerful means for eliciting humoral and cellular immune responses against **HIV**.

L30 ANSWER 9 OF 12 MEDLINE on STN

96159130. PubMed ID: 8573390. Helper and **cytotoxic** T cell responses of **HIV** type 1-infected individuals to synthetic peptides of **HIV** type 1 **Rev**. Blazevic V; Ranki A; Krohn K.J. (Institute of Medical Technology, University of Tampere, Finland.) AIDS research and human retroviruses, **(1995 Nov)** 11 (11) 1335-42. Journal code: 8709376. ISSN: 0889-2229. Pub. country: United States. Language: English.

AB In cell-mediated immunity T cells recognize peptide fragments of the antigenic protein in association with major histocompatibility complex (MHC) proteins. Synthetic 9- to 16-mer peptides have been widely used to identify the region(s) of a protein that act as T cell **epitope**. Here, we report antigenic peptides identified on **HIV**-1 regulatory protein **Rev**. Four synthetic peptides (amino acids 9-23, 25-39, 33-48, and 41-56) were first shown to stimulate T helper (Th) cell proliferation in peripheral blood lymphocytes (PBLs) derived from **HIV**-seropositive (**HIV**+) individuals. The same peptides induced **cytotoxic** T lymphocyte (**CTL**) activities toward the autologous target cells incubated with the peptides. Both responses were specific to the **HIV** infection as **HIV**-seronegative (**HIV**-) control individuals showed no significant

proliferative or **cytotoxic** activity. The proliferating cells were CD4+ T cells, and **CTL** activity was mediated by CD8+ human leukocyte antigen (HLA)-restricted T cells. The identification of peptides containing **epitopes** that can induce both Th and **CTL** responses to regulatory proteins of **HIV**-1 in infected individuals might be important for vaccine development against AIDS. Since early regulatory proteins of **HIV** are expressed by the infected cells before the initiation of the synthesis of structural proteins, a **CTL** response against these proteins could destroy the infected cells before the release of infectious virions.

L30 ANSWER 10 OF 12 MEDLINE on STN
93112294. PubMed ID: 1472331. Qualitative and quantitative analysis of human **cytotoxic** T-lymphocyte responses to **HIV**-1 proteins. Lamhamedi-Cherradi S; Culmann-Penciolelli B; Guy B; Kieny M P; Dreyfus F; Saimot A G; Sereni D; Sicard D; Levy J P; Gomard E. (INSERM U152, ICGM, Hopital Cochin, Paris, France.) AIDS (London, England), **(1992 Nov)** 6 (11) 1249-58. Journal code: 8710219. ISSN: 0269-9370. Pub. country: United States. Language: English.

AB OBJECTIVE: To study the degree of immunogenicity of each **HIV**-1 protein. DESIGN: In most viral systems, antiviral **cytotoxic** T-lymphocytes (**CTL**) from a given donor preferentially recognize only one or a small number of viral proteins. METHODS: Anti-**HIV CTL** were generated by in vitro stimulation of peripheral blood mononuclear cells from seropositive donors and tested against multiple **HIV**-1 proteins or groups of proteins encoded by seven genes (env, gag, pol, nef, **rev**, tat and vif). Using autologous target cells infected with recombinant vaccinia viruses expressing one of the **HIV**-1LAI proteins, we compared the cytolytic activities obtained from bulk culture with those found in limiting dilution analysis (LDA). RESULTS: Our results were noteworthy for the following reasons. (1) Each responding donor reacted simultaneously to multiple proteins; this is very unusual in other viral systems. Anti-Gag **CTL** were detected in most, and anti-Pol in approximately three-quarters, of the patients, together with very high amounts of the corresponding **CTL** precursors in LDA. **CTL** against Env and Nef were found in two-thirds of the patients, while Vif- and **Rev**-specific **CTL** were less frequent. Finally, Tat was seldom recognized by **CTL**, but its antigenicity was revealed in LDA. (2) All responding cells revealed in bulk cultures as well as in LDA were CD8+ T-cells, and their in vitro differentiation did not require the help of CD4+ T-cells. (3) Proteins from the **HIV**-1LAI isolate were recognized with high frequency by **CTL** from seropositive donors, most certainly being infected by other isolates, which suggests that relatively conserved **epitopes** are predominant targets of **CTL**. CONCLUSION: Taken together, these results are encouraging for vaccine purposes, since anti-**HIV**-1 **CTL** stimulation is thought to be a requirement for such a vaccine.

L30 ANSWER 11 OF 12 MEDLINE on STN
93110974. PubMed ID: 1281948. Development of a vaccine for the prevention of AIDS, a critical appraisal. Karzon D T; Bolognesi D P; Koff W C. (Department of Pediatrics, Vanderbilt Medical School, Nashville, TN 37232.) Vaccine, **(1992)** 10 (14) 1039-52. Ref: 108. Journal code: 8406899. ISSN: 0264-410X. Pub. country: ENGLAND: United Kingdom. Language: English.

AB The pathogenesis and clinical expression of **HIV**-1 infection in humans is considered in terms of classical pathogenetic studies of viral infections for which successful vaccines have been produced. The unique features of **HIV** pathogenesis are defined, and gaps in knowledge identified as a framework for considering designs for immune intervention. Envelope-derived candidate vaccines have been used in immunization and challenge experiments in SIV/macaque or **HIV**/chimpanzee models, presented either as vaccinia recombinant vectors or as subunits, singly or in sequence. These studies have been paralleled by clinical trials for safety and immunogenicity in seronegative individuals. Data generated will permit comparison of immune responses to specific antigens and delivery systems in animal models and in humans. In limited studies conducted under optimized conditions, non-human primates have been protected against virus challenge when immunized with some candidate vaccines or following passive transfer of high-titred antibody. Consideration of current information suggests that in order to prevent **HIV** infection it may be necessary to devise new strategies capable of inducing and maintaining high threshold titres of biologically relevant antibody as well as persistence of active **cytotoxic** T cells recognizing multiple **epitopes**.

L30 ANSWER 12 OF 12 MEDLINE on STN
91302806. PubMed ID: 1712812. HLA-binding regions of **HIV**-1 proteins. II. A systematic study of viral proteins. Choppin J; Martinon F; Connan F; Pauchard M; Gomard E; Levy J P. (Institut Cochin de Genetique Moleculaire (ICGM), INSERM U152, Paris, France.) Journal of immunology (Baltimore, Md. : 1950), **(1991 Jul 15)** 147 (2) 575-83. Journal code: 2985117R. ISSN: 0022-1767. Pub. country: United States. Language: English.

AB To detect HLA-binding peptides in 10 **HIV**-1 proteins (**Rev**, Tat, Vif, Vpr, Vpu, Gag p18, Gag p24, Gag p15, Env gp120 and Env gp41), the peptide binding assay (PBA) has been performed using three HLA class I molecules. Correlations have been searched between the PBA results and the peptide competitor activity in a functional test using HLA-A2-restricted **CTL** and target cells. A correlation between the data found in the PBA and well-defined **CTL epitopes** could be attempted only for the three Gag proteins. For these proteins, our results are in agreement with the known existence of **epitopes** reacting with human CD8+ **CTL**, with some exceptions. Together with the results reported with a panel of Nef peptides, these experiments showed that at least 18/20 of the already reported **CTL epitopes** from **HIV**-1 Gag, Nef, and Env proteins could be detected by the PBA, most (17/18) corresponding to strong reactivities. Perhaps more important, the regions of **HIV**-1 Gag p24 or Nef proteins that contain multiple associated **CTL epitopes**, with different HLA restrictions, were clearly identified by the reactivities in the PBA of several overlapping peptides and the major practical interest of the PBA might be the detection of such polyepitopic regions. Prediction are proposed in this report for 10 proteins, including several proteins for which **CTL epitopes** remain presently unknown.

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(FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
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L3 47 S L2 AND (T-HELPER)
L4 2 S L3 AND (T-HELPER/CLM)

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L8 4 S L7 NOT L5

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FILE 'USPATFULL' ENTERED AT 16:20:38 ON 06 SEP 2005
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L11 13497 S L10 AND (T-HELPER OR CD4?)
L12 3031 S L11 AND (T-HELPER)
L13 943 S L12 AND AY<2000
L14 45 S L13 AND (T-HELPER/CLM)
L15 18902 S L10 AND REV
L16 2167 S L15 AND (CTL OR CTL EPITOPE?)
L17 1836 S L16 AND (EPITOPE?)
L18 352 S L17 AND (CTL/CLM OR CYTOTOXIC/CLM)
L19 84 S L18 AND AY<2000
L20 10 S L19 AND REV/CLM

FILE 'MEDLINE' ENTERED AT 16:35:30 ON 06 SEP 2005

FILE 'USPATFULL' ENTERED AT 16:35:51 ON 06 SEP 2005
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L22 859 S L21 AND (NUCLEOCAPSID)
L23 294 S L22 AND (CTL OR CYTOTOXIC T LYMPHOCYTE?)
L24 0 S L23 AND CLP-243
L25 99 S L23 AND AY<2000

FILE 'MEDLINE' ENTERED AT 16:41:11 ON 06 SEP 2005
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L27 1451 S L26 AND REV
L28 58 S L27 AND EPITOPE?
L29 29 S L28 AND (CTL OR CYTOTOXIC)
L30 12 S L29 AND PY<2000

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28957 HELPER

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              (T(W)HELPER)
        28957 HELPER
L31         5 L28 AND (T-HELPER OR HELPER)

=> s l31 and py<2000
     12405073 PY<2000
L32         2 L31 AND PY<2000

=> d l32,cbib,ab,1-2

L32  ANSWER 1 OF 2     MEDLINE on STN
97120475.     PubMed ID: 8961146.   Humoral and cellular immunities elicited by
     HIV-1 vaccination. Shiver J W; Davies M E; Perry H C; Freed D C; Liu M
     A. (Department of Virus and Cell Biology, Merck Research Laboratories,
     West Point, PA 19486, USA. ) Journal of pharmaceutical sciences, (1996
     Dec) 85 (12) 1317-24. Journal code: 2985195R. ISSN: 0022-3549. Pub.
     country: United States. Language: English.
AB   Recently it has been shown that immunization with plasmid DNA encoding
     genes for viral or bacterial antigens can elicit both humoral and cellular
     immune responses in rodents and nonhuman primates. In this study, mice
     and nonhuman primates were vaccinated by intramuscular injection with
     plasmids that express either a secreted form of HIV-1 gp120 or rev
     proteins. Mice receiving the tPA-gp120 DNA developed antigen-specific
     antibody responses against recombinant gp120 protein and the V2 peptide
     neutralization epitope as determined by ELISA. Vaccinated mice also
     exhibited gp120-specific T cell responses, such as in vitro proliferation
     of splenocytes and MHC Class I-restricted cytotoxic T lymphocyte (CTL)
     activities, following antigen restimulation. In addition, supernatants
     from these lymphocyte cultures showed high levels of gamma-interferon
     production compared with IL-4, suggesting that primarily type 1-like
     helper T (Th1) lymphocyte responses were induced by both vaccines.
     Th1-like responses were also obtained for mice vaccinated with rev DNA.
     Immune responses induced by gp120 or rev vaccines were dose-dependent,
     boostable, and long-lived (> or = 6 months). Nonhuman primates vaccinated
     with tPA-gp120 DNA also showed antigen-specific T lymphocyte proliferative
     and humoral responses, including moderate levels of neutralizing sera
     against homologous HIV. These results suggest that plasmid DNA may
     provide a powerful means for eliciting humoral and cellular immune
     responses against HIV.

L32  ANSWER 2 OF 2     MEDLINE on STN
96159130.     PubMed ID: 8573390.   Helper and cytotoxic T cell responses of
     HIV type 1-infected individuals to synthetic peptides of HIV type 1
     Rev. Blazevic V; Ranki A; Krohn K J. (Institute of Medical Technology,
     University of Tampere, Finland. ) AIDS research and human retroviruses,
     (1995 Nov) 11 (11) 1335-42. Journal code: 8709376. ISSN: 0889-2229.
     Pub. country: United States. Language: English.
AB   In cell-mediated immunity T cells recognize peptide fragments of the
     antigenic protein in association with major histocompatibility complex
     (MHC) proteins. Synthetic 9- to 16-mer peptides have been widely used to
     identify the region(s) of a protein that act as T cell epitope. Here,
     we report antigenic peptides identified on HIV-1 regulatory protein
     Rev. Four synthetic peptides (amino acids 9-23, 25-39, 33-48, and
     41-56) were first shown to stimulate T helper (Th) cell proliferation
     in peripheral blood lymphocytes (PBLs) derived from HIV-seropositive
     (HIV+) individuals. The same peptides induced cytotoxic T lymphocyte
     (CTL) activities toward the autologous target cells incubated with the
     peptides. Both responses were specific to the HIV infection as
     HIV-seronegative (HIV-) control individuals showed no significant
     proliferative or cytotoxic activity. The proliferating cells were CD4+ T
     cells, and CTL activity was mediated by CD8+ human leukocyte antigen
     (HLA)-restricted T cells. The identification of peptides containing
     epitopes that can induce both Th and CTL responses to regulatory
     proteins of HIV-1 in infected individuals might be important for vaccine
     development against AIDS. Since early regulatory proteins of HIV are
     expressed by the infected cells before the initiation of the synthesis of
     structural proteins, a CTL response against these proteins could destroy
     the infected cells before the release of infectious virions.


=> d his

     (FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

     FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
               E SIA CHARLES/IN
L1          16 S E3-E5
               E KLEIN MICHEL/IN
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L2          177 S E3-E5
L3           47 S L2 AND (T-HELPER)
L4            2 S L3 AND (T-HELPER/CLM)

     FILE 'WPIDS' ENTERED AT 16:13:39 ON 06 SEP 2005
                E SIA CHARLES/IN
                E SIA C D Y/IN
L5           19 S E1 OR E3
                E KLEIN M/IN
L6          264 S E3
L7            4 S L6 AND (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L8            4 S L7 NOT L5

     FILE 'MEDLINE' ENTERED AT 16:19:14 ON 06 SEP 2005
                E SIA C D Y/AU
L9           19 S E1 OR E8

     FILE 'USPATFULL' ENTERED AT 16:20:38 ON 06 SEP 2005
L10       40963 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L11       13497 S L10 AND (T-HELPER OR CD4?)
L12        3031 S L11 AND (T-HELPER)
L13         943 S L12 AND AY<2000
L14          45 S L13 AND (T-HELPER/CLM)
L15       18902 S L10 AND REV
L16        2167 S L15 AND (CTL OR CTL EPITOPE?)
L17        1836 S L16 AND (EPITOPE?)
L18         352 S L17 AND (CTL/CLM OR CYTOTOXIC/CLM)
L19          84 S L18 AND AY<2000
L20          10 S L19 AND REV/CLM

     FILE 'MEDLINE' ENTERED AT 16:35:30 ON 06 SEP 2005

     FILE 'USPATFULL' ENTERED AT 16:35:51 ON 06 SEP 2005
L21       10942 S (HEPATITIS B VIRUS OR HBV)
L22         859 S L21 AND (NUCLEOCAPSID)
L23         294 S L22 AND (CTL OR CYTOTOXIC T LYMPHOCYTE?)
L24           0 S L23 AND CLP-243
L25          99 S L23 AND AY<2000

     FILE 'MEDLINE' ENTERED AT 16:41:11 ON 06 SEP 2005
L26      155962 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L27        1451 S L26 AND REV
L28          58 S L27 AND EPITOPE?
L29          29 S L28 AND (CTL OR CYTOTOXIC)
L30          12 S L29 AND PY<2000
L31           5 S L28 AND (T-HELPER OR HELPER)
L32           2 S L31 AND PY<2000

=> s (HBV or hepatitis B virus)
         13834 HBV
        131444 HEPATITIS
        623980 B
        399184 VIRUS
         21458 HEPATITIS B VIRUS
                 (HEPATITIS(W)B(W)VIRUS)
L33      24917 (HBV OR HEPATITIS B VIRUS)

=> s l33 and (NC or nucleocapsid)
          6338 NC
          4447 NUCLEOCAPSID
L34        332 L33 AND (NC OR NUCLEOCAPSID)

=> s l34 and (T-helper or helper)
       4008945 T
         28957 HELPER
         11440 T-HELPER
                 (T(W)HELPER)
         28957 HELPER
L35         20 L34 AND (T-HELPER OR HELPER)

=> s l35 and py<2000
      12405073 PY<2000
L36         17 L35 AND PY<2000

=> d l36,cbib,ab,1-17

L36  ANSWER 1 OF 17     MEDLINE on STN
1999162532.    PubMed ID: 10051569.   Native display of complete foreign
     protein domains on the surface of hepatitis B virus capsids. Kratz P
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A; Bottcher B; Nassal M. (University Hospital Freiburg, Department of Internal Medicine II/Molecular Biology, Hugstetter Strasse 55, D-79106 Freiburg, Germany.) Proceedings of the National Academy of Sciences of the United States of America, **(1999 Mar 2)** 96 (5) 1915-20. Journal code: 7505876. ISSN: 0027-8424. Pub. country: United States. Language: English.

AB The **nucleocapsid** of **hepatitis B virus** (**HBV**), or HBcAg, is a highly symmetric structure formed by multiple dimers of a single core protein that contains potent **T helper** epitopes in its 183-aa sequence. Both factors make HBcAg an unusually strong immunogen and an attractive candidate as a carrier for foreign epitopes. The immunodominant c/e1 epitope on the capsid has been suggested as a superior location to convey high immunogenicity to a heterologous sequence. Because of its central position, however, any c/e1 insert disrupts the core protein's primary sequence; hence, only peptides, or rather small protein fragments seemed to be compatible with particle formation. According to recent structural data, the epitope is located at the tips of prominent surface spikes formed by the very stable dimer interfaces. We therefore reasoned that much larger inserts might be tolerated, provided the individual parts of a corresponding fusion protein could fold independently. Using the green fluorescent protein (GFP) as a model insert, we show that the chimeric protein efficiently forms fluorescent particles; hence, all of its structurally important parts must be properly folded. We also demonstrate that the GFP domains are surface-exposed and that the chimeric particles elicit a potent humoral response against native GFP. Hence, proteins of at least up to 238 aa can be natively displayed on the surface of **HBV** core particles. Such chimeras may not only be useful as vaccines but may also open the way for high resolution structural analyses of nonassembling proteins by electron microscopy.

L36 ANSWER 2 OF 17 MEDLINE on STN

1998298346. PubMed ID: 9632891. Specificity of humoral and cellular immune response against recombinant particles of **nucleocapsid** protein of human **hepatitis B virus** in rabbits. Isaguliants M G; Kadoshnikov Y P; Kalinina T I; Smirnov V D; Wahren B. (Ivanovsky Institute of Virology, Moscow, 123098, Russia.) Biochemistry. Biokhimiia, **(1998 May)** 63 (5) 551-8. Journal code: 0376536. ISSN: 0006-2979. Pub. country: RUSSIA: Russian Federation. Language: English.

AB **Nucleocapsid** (core) protein of **hepatitis B virus** (HBcAg) induces potent cellular and humoral responses that have a clear protective potential. Rabbits were immunized by particles formed by recombinant molecules of HBcAg carrying N-terminally inserted heterologous sequences. Specificity of humoral and cellular immune response against HBcAg and selection of HBcAg epitopes was surveyed. Immunological properties of the recombinant particles were similar to those of the original HBcAg. Recombinant particles were not toxic to the peripheral blood mononuclear cells (PBMC) of non-immune or HBcAg-immunized animals ex vivo. Proliferative response of PBMC (T-lymphocytes) to HBcAg in immunized animals increased in a concentration-dependent manner in the broad interval of HBcAg concentrations (10-104 ng/ml). On the contrary, a narrow bell-shaped HBcAg dose-dependence curve was earlier observed for T-lymphocytes of donors immune to **HBV** after natural infection that was probably due to the cytotoxic effect of HBcAg on the expressing cells. Specificity of humoral and cellular immune response against HBcAg particles in the immunized animals and in natural infection with **hepatitis B virus** (**HBV**) was compared. Immunization with recombinant HBcAg particles induced potent anti-HBcAg antibody responses: high (up to 2.107) titers of anti-HBcAg antibodies were reached. Appearance of anti-HBcAg antibodies was in every case preceded by an increasing T-cell response to the whole protein and HBcAg-derived peptides, thus mimicking immune responses during acute **HBV** infection in humans. A predominant universal (haplotype-independent) **T-helper** cell epitope (amino acid residues (aa) 61-85 of HBcAg (p61-85)) was recognized by T-cells of all animals. Transient antibody response against p61-85 was recorded during the early stages of immunization in spite of the fact that a major B-cell epitope localized in this region is supposed to be purely conformational. A sequence representing another cluster of immunodominant T-cell epitopes of mice and **HBV** infected humans, aa 121-140 (p121-140), was not immunogenic on the T-cell level. However, it appeared to be a potent B-cell immunogen, despite a common assumption that HBcAg and p121-140 are not cross-reactive at the B-cell level. A possibility that anti-p121-140 antibodies were induced by an exposed region of the native particulate HBcAg and not by the denatured protein molecules, was confirmed by recognition of the particulate HBcAg by antibodies specific to synthetic peptides representing aa 120-140 of HBcAg. The data point to the exposition of aa 121-140 on the surface of the particles.

L36 ANSWER 3 OF 17 MEDLINE on STN

1998291414. PubMed ID: 9627944. Differential cellular and humoral immune

responses to HCV core and **HBV** envelope proteins after genetic immunizations using chimeric constructs. Geissler M; Tokushige K; Wakita T; Zurawski V R Jr; Wands J R. (Molecular Hepatology Laboratory, Massachusetts General Hospital Cancer Centre, Charlestown, USA.. mgeissl@ukl.uni-freiburg.de) . Vaccine, **(1998 May)** 16 (8) 857-67. Journal code: 8406899. ISSN: 0264-410X. Pub. country: ENGLAND: United Kingdom. Language: English.

AB Development of a broad based cellular and humoral immune response to hepatitis C virus (HCV) structural proteins may be important for eradication of viral infection. In previous studies in mice we demonstrated that facilitated DNA-based immunization with an HCV core DNA-expression construct stimulated the generation of weak cytotoxic T lymphocyte (CTL), **helper** T cell (Th), and humoral immune responses against HCV core related epitopes. To enhance the immunogenicity of this non-secreted viral structural protein at both the B- and T-cell level, several chimeric **HBV**-HCV constructs were prepared which were designed to express and secrete HCV core protein along with various regions of the hepatitis B envelope protein. No secretion of the chimeric proteins into the culture supernatant was detected using sensitive radioimmunoassays. However, such chimeric proteins were capable of generating CD4+ inflammatory T cell and CD8+ CTL activity against both **HBV** and HCV components of the fusion proteins. It was determined that the proliferative activity of T cells as well as the humoral immune responses to HCV core protein were substantially enhanced by some chimeric fusion proteins as compared to the HCV core protein alone. The strength of the immune responses appeared directly related to the level of Th1 cytokines produced by CD4+ T cells obtained from immunized animals. Further characterization of the immune responses stimulated by these DNA constructs studied helped to define some of the most immunogenic regions of the chimeric proteins that they encode.

L36 ANSWER 4 OF 17 MEDLINE on STN

1998090908. PubMed ID: 9429210. Influence of **T-helper** cell subsets and crossregulation in **hepatitis B virus** infection. Milich D R. (Scripps Research Institute, Department of Molecular Biology, La Jolla, CA 92037, USA.) Journal of viral hepatitis, **(1997)** 4 Suppl 2 48-59. Journal code: 9435672. ISSN: 1352-0504. Pub. country: ENGLAND: United Kingdom. Language: English.

AB Serological and biochemical studies indicate that acute **HBV** infection is resolved in the context of an efficient cell-mediated immune (CMI) response, whereas, chronic infection is characterized by weak to undetectable CMI responses and relatively efficient humoral immunity. Because humoral immunity and CMI are regulated by different TH subsets, factors which influence the induction of TH1 vs TH2 cells specific for the **HBV nucleocapsid** antigens (HBcAg, HBeAg) were examined in a murine model system. The factors which affected the HBc/HBeAg-specific TH1/TH2-cell balance included: (1) the structure of the antigen (i.e. HBcAg vs HBeAg); (2) the host MHC and T-cell site recognized; (3) crossregulation between TH1 and TH2 cells; (4) T-cell tolerance, which is more complete in TH1 than in TH2 cells; (5) secreted HBeAg, which preferentially depletes TH1 cells; (6) the **HBV**-specific subset response could be skewed towards either TH1 or TH2 predominance by cytokine treatment in vivo. The results suggest that the balance between TH1 and TH2 cells specific for the HBc/HBeAgs may be relevant in acute and chronic **HBV** infections. Importantly, HBeAg-specific TH2 cells preferentially evade tolerance induction as compared to their TH1-cell counterparts. Because HBeAg may act as a tolerogen during the vertical transmission of chronic **HBV** infection and preferentially depletes TH1 cells in the circulation, the predominance of HBeAg-specific TH2 cells may influence the initiation or maintenance of the chronic carrier state. In this case, cytokine therapy designed to shift a TH2-like response toward TH1 predominance (i.e. IL-12) may be beneficial in the treatment of chronic **HBV** infection.

L36 ANSWER 5 OF 17 MEDLINE on STN

97252448. PubMed ID: 9098017. Cellular and humoral immune response to **hepatitis B virus** structural proteins in mice after DNA-based immunization. Geissler M; Tokushige K; Chante C C; Zurawski V R Jr; Wands J R. (Molecular Hepatology Laboratory, Massachusetts General Hospital, Charlestown 02129, USA.) Gastroenterology, **(1997 Apr)** 112 (4) 1307-20. Journal code: 0374630. ISSN: 0016-5085. Pub. country: United States. Language: English.

AB BACKGROUND & AIMS: Development of a broad-based cellular immune response to hepatitis B viral structural proteins may be important for recovery from infection, and lack of such responses may lead to persistent viral infection and chronic liver disease. Strategies designed to enhance the **hepatitis B virus** (**HBV**)-specific immune response may be able to reduce persistent viral infection of the liver. The aim of this study was to induce **HBV**-specific cellular and humoral immune responses in mice

using DNA-based immunizations with the large and middle envelope and **nucleocapsid** proteins. METHODS: Antibodies to **HBV** structural proteins, **T-helper**-cell proliferation, and cytokine release and generation of cytotoxic T lymphocyte (CTL) activity were measured in vaccinated mice. RESULTS: Immunized mice developed high-titer antibodies against envelope and core proteins in serum. More importantly, 93% of the immunized mice produced strong inflammatory CD4+ T-cell and CD8+ CTL responses to viral proteins. CONCLUSIONS: This study shows that DNA-based vaccination will generate broad-based CTL activity as well as strong **T-helper** cell responses with the production of TH1-type cytokines to **HBV** structural proteins. Such constructs are promising candidates as antiviral agents, and these studies have defined some of the most immunogenic antigens for an immunotherapeutic approach of chronic **HBV** infection.

L36 ANSWER 6 OF 17 MEDLINE on STN

97250931. PubMed ID: 9096614. Predominant **T-helper** 1 cytokine profile of **hepatitis B virus nucleocapsid**-specific T cells in acute self-limited hepatitis B. Penna A; Del Prete G; Cavalli A; Bertoletti A; D'Elios M M; Sorrentino R; D'Amato M; Boni C; Pilli M; Fiaccadori F; Ferrari C. (Cattedra Malattie Infettive, Universita di Parma, Italy.) Hepatology (Baltimore, Md.), **(1997 Apr)** 25 (4) 1022-7. Journal code: 8302946. ISSN: 0270-9139. Pub. country: United States. Language: English.

AB The cytokine pattern secreted by T cells on viral antigen recognition is believed to exert a profound influence on both the type of disease caused by the infecting agent and the final outcome of the viral infection. To characterize the cytokine pattern associated with spontaneous resolution of acute hepatitis B, we analyzed interferon gamma (IFN-gamma), interleukin (IL)-4, and IL-5 production by a wide series of **hepatitis B virus** (**HBV**) **nucleocapsid**-specific T-cell lines (34 lines) and T-cell clones (71 clones) derived from the peripheral blood of 13 patients during the acute or recovery phase of hepatitis B (2 and 7 of them were studied only in the recovery or the acute phase, respectively, and 4 during both). Most T-cell lines (67%) and clones (77%) isolated during the acute phase of infection expressed a **T-helper** (Th) 1 cytokine profile dominated by the production of IFN-gamma. A larger proportion (74%) of T-cell lines produced several years after resolution of hepatitis was able to secrete not only IFN-gamma, but also IL-4 and IL-5 (Th0-like cells). Results indicate that the antigen-specific fraction of peripheral blood T cells in acute self-limited hepatitis B selectively secrete Th1-type eytokines, suggesting that Th1-mediated effects may contribute not only to liver cell injury, but probably also to recovery from disease and successful control of infection.

L36 ANSWER 7 OF 17 MEDLINE on STN

95222723. PubMed ID: 7535865. Preferential recognition of hepatitis B **nucleocapsid** antigens by Th1 or Th2 cells is epitope and major histocompatibility complex dependent. Milich D R; Peterson D L; Schodel F; Jones J E; Hughes J L. (Department of Molecular Biology, Scripps Research Institute, La Jolla, California 92037, USA.) Journal of virology, **(1995 May)** 69 (5) 2776-85. Journal code: 0113724. ISSN: 0022-538X. Pub. country: United States. Language: English.

AB Regulatory **T-helper** (Th) cells have been categorized into two functional subsets, Th1 and Th2 cells, which produce distinct lymphokines. In general, Th1 cells mediate cellular immune responses and Th2 cells mediate humoral immunity. Recent serological studies suggest that the Th1-Th2 balance may be relevant in acute and chronic **hepatitis B virus** (**HBV**) infections. The purpose of this study was to determine the potential of the **nucleocapsid** antigens (Ags) (hepatitis B core and e Ags [HBc/eAg]) of **HBV** to preferentially elicit either a Th1 or a Th2 dominant response. For this purpose, H-2 congenic B10.S and B10 mice were immunized with HBc/eAg, and Ag-specific T-cell proliferative responses, T-cell **helper** function, and T-cell cytokine production were analyzed. The results indicated that B10.S mice preferentially develop a Th1-like response whereas B10 mice preferentially develop a Th2-like response after immunization with HBc/eAg. Furthermore, the preferential Th1 and Th2 response patterns were reproduced when 12-residue peptides representing the dominant HBc/eAg-specific T-cell sites for B10.S (peptide 120-131) and B10 (peptide 129-140) mice were used as immunogens. Therefore, the combination of the T-cell site recognized and the major histocompatibility complex restricting element can in large part determine the Th phenotype of the HBc/eAg-specific T-cell response. Other factors that influenced Th phenotype were the presence of exogenous cytokines, Ag structure, and tissue distribution.

L36 ANSWER 8 OF 17 MEDLINE on STN

95154369. PubMed ID: 7531642. T cell recognition of hepatitis B and C viral antigens. Jung M C; Diepolder H M; Pape G R. (Medical Department II, Klinikum Grosshadern, University of Munich, Germany.) European journal of

clinical investigation, **(1994 Oct)** 24 (10) 641-50. Ref: 77. Journal code: 0245331. ISSN: 0014-2972. Pub. country: ENGLAND: United Kingdom. Language: English.

AB The outcome of hepatitis B and C heavily depends on the appropriate virus specific T cell response. Both CD8+ and CD4+ T lymphocytes do not recognize native viral proteins but processed peptides bound to MHC class I and class II, respectively. For therapeutical intervention aimed at T lymphocytes in chronic carriers as well as for the development of new vaccines, a precise identification of immunodominant epitopes, which can be recognized by a majority of patients, is necessary. Biological features of certain viral antigens have been partly characterized in animal models, but with the availability of modern molecular technology it is possible to extend these findings to the human system. The identification of anchor residues and motifs in peptides, which are essential for binding to certain MHC class I and class II molecules, allows the prediction of MHC allele-specific epitopes within viral proteins. By the use of synthetic peptides and vaccinia expression vectors, several epitopes for cytotoxic and **helper** T lymphocytes have been identified in **HBV** and HCV antigens. In **HBV** infection cytotoxic T lymphocytes recognize epitopes within the polymerase protein, the envelope protein and the **nucleocapsid**. In HCV cytotoxic epitopes have so far been identified within the **nucleocapsid**, E1, E2 and NS2. Since virus specific CD8+ T lymphocytes lyse virus infected cells in vitro and seem to play an important role for viral elimination in vivo, activation of virus specific effector cells may be achieved by immunizing chronically infected patients with the MHC-allele-specific peptides. Epitopes for CD4+ T lymphocytes have been demonstrated in the majority of **HBV**- and HCV-proteins. Different subsets of CD4+ T lymphocytes influence the course of infection by the production of lymphokines which either support antibody production by B cells or cellular antiviral effector mechanisms. In acute and chronic **HBV** infection the HBcAg/HBeAg-specific T cell response is closely correlated to viral elimination and the occurrence of anti-HBe- and anti-HBs antibodies. In HCV infection the CD4+ T cell response appears to be more heterogenous, and better functional characterization of the CD4+ response to immunodominant peptide epitopes in association with certain disease stages is required. Since T cell activation, the resulting effector functions and binding of the peptide to the HLA-molecule mainly depend on the peptide structure, viral mutations leading to amino acid changes may contribute to T cell non-responsiveness or an inappropriate T cell response.(ABSTRACT TRUNCATED AT 400 WORDS)

L36 ANSWER 9 OF 17 MEDLINE on STN

94083874. PubMed ID: 8260881. Cell mediated immune response to **hepatitis B virus nucleocapsid** antigen. Ferrari C; Penna A; Bertoletti A; Fiaccadori F. (Cattedra Malattie Infettive, Universita di Parma, Italy.) Archives of virology. Supplementum, **(1993)** 8 91-101. Ref: 33. Journal code: 9214275. ISSN: 0939-1983. Pub. country: Austria. Language: English.

AB A coordinated and efficient development of humoral and cell-mediated immune responses is believed to be required for complete eradication of viral infections. During the course of **hepatitis B virus** (**HBV**) infection, the HLA class II and class I-restricted T cell responses to **HBV nucleocapsid** antigens are vigorous in patients with acute infection who succeed in clearing the virus but weak or totally absent in patients with chronic persistence of the virus. These findings suggest a role for these responses in the pathogenesis of hepatitis B and in **HBV** clearance. Molecular analysis of T cell recognition of the **HBV** nucleoprotein defines the presence of immunodominant core epitopes recognized by **helper** and cytotoxic T cells that may represent the starting point for the design of alternative strategies for prevention and treatment of **HBV** infection.

L36 ANSWER 10 OF 17 MEDLINE on STN

93267836. PubMed ID: 7684473. Hybrid **hepatitis B virus nucleocapsid** bearing an immunodominant region from **hepatitis B virus** surface antigen. Borisova G; Arya B; Dislers A; Borschukova O; Tsibinogin V; Skrastina D; Eldarov M A; Pumpens P; Skryabin K G; Grens E. (Institute of Molecular Biology, Latvian Academy of Sciences, Riga.) Journal of virology, **(1993 Jun)** 67 (6) 3696-701. Journal code: 0113724. ISSN: 0022-538X. Pub. country: United States. Language: English.

AB A hepatitis B core antigen (HBcAg) gene bearing the 39-amino-acid-long domain A of hepatitis B surface antigen (HBsAg) within the HBcAg immunodominant loop has been constructed and expressed in Escherichia coli. Chimeric capsids demonstrated HBs but not HBc antigenicity and elicited in mice B-cell and T-cell responses against native HBcAg and HBsAg.

L36 ANSWER 11 OF 17 MEDLINE on STN

93090548. PubMed ID: 1457254. [The immunopathogenesis of hepatitis B]. Immunopatogenesi dell'epatite B. Fiaccadori F; Bertoletti A; Penna A;

Ferrari C. (Cattedra Malattie Infettive, Universita degli Studi di Parma.) Annali italiani di medicina interna : organo ufficiale della Societa italiana di medicina interna, **(1992 Jul-Sep)** 7 (3) 153-9. Ref: 76. Journal code: 8806705. ISSN: 0393-9340. Pub. country: Italy. Language: Italian.

AB Knowledge of hepatitis B immunopathogenesis has greatly improved in the last few years thanks to the development of new methods of lymphocyte culture and the introduction of molecular techniques in the study of the cell-mediated antiviral immune responses. Some of the immune mechanisms likely responsible for liver cell injury and viral clearance during hepatitis B have recently been characterized. By using synthetic peptides and high efficiency recombinant expression vectors. HLA class I restricted cytotoxic T cells specifically able to recognize the **nucleocapsid** antigen of the **hepatitis B virus** (**HBV**) have been isolated from the blood of patients with acute self-limited hepatitis B. The observation that this cytotoxic response is lacking or very weak in chronic patients who do not succeed in clearing the virus suggests a major role for cytotoxic T cells in terminating virus infection. Similar behaviour is shown by HLA class II restricted CD4+ T cells which express much stronger levels of response to **HBV nucleocapsid** antigens in acute than in chronic **HBV** infection. Whether these defective responses in chronic patients are due to an actual lesion of the host's immune system or to viral mutations affecting immune surveillance and thereby allowing virus escape, still remain open issues. A definitive answer to these questions will, we hope, provide the appropriate tools to devise effective immune therapies against chronic **HBV** infection.

L36 ANSWER 12 OF 17 MEDLINE on STN

92341346. PubMed ID: 1668281. T cell lines reactive with hepatitis B core and E antigens in patients with chronic hepatitis B. Ishikawa T; Kakumu S; Yoshioka K; Wakita T; Shinagawa T; Ito Y. (Third Department of Internal Medicine, Nagoya University School of Medicine, Japan.) Journal of clinical & laboratory immunology, **(1991 Apr)** 34 (4) 151-6. Journal code: 7808987. ISSN: 0141-2760. Pub. country: SCOTLAND: United Kingdom. Language: English.

AB **Hepatitis B virus** (**HBV**)-associated **nucleocapsid** antigen (HB core and HB e) is believed to be a major target for T cell-mediated hepatocellular damage in chronic **HBV** carriers. Studies were undertaken to determine whether both **nucleocapsid** Ag could be recognized by T cell lines from peripheral blood mononuclear cells (PBMC) from patients with chronic hepatitis B. After cultivation in the presence of rHBcAg or purified HBeAg, growing cells were cloned by limiting dilution in the presence of PHA, IL-2 and allogenic feeder cells. Four HBcAg-reactive and three HBeAg-reactive T cell lines from two patients were generated by proliferation assays. None of the cell lines responded to HB surface Ag or PPD. Four lines were of the CD8+ CD11b- cytotoxic phenotype, two of the CD4+ Leu8- **helper** phenotype, and the remaining one consisted of mixed populations of CD4+ Leu8+ and CD4+ Leu8- cells. Cross-reactivity study showed that a HBcAg-induced CD4+ T cell line responded to HBeAg, and similarly a HBeAg-induced CD8+ T cell line responded to HBcAg. The reactions were inhibited by HLA class II antibody, but not by class I Ab.

L36 ANSWER 13 OF 17 MEDLINE on STN

92085371. PubMed ID: 1370083. The position of heterologous epitopes inserted in **hepatitis B virus** core particles determines their immunogenicity. Schodel F; Moriarty A M; Peterson D L; Zheng J A; Hughes J L; Will H; Leturcq D J; McGee J S; Milich D R. (Max-Planck-Institut fur Biochemie, Martinsried, Germany.) Journal of virology, **(1992 Jan)** 66 (1) 106-14. Journal code: 0113724. ISSN: 0022-538X. Pub. country: United States. Language: English.

AB The **nucleocapsid** (HBcAg) of the **hepatitis B virus** (**HBV**) has been suggested as a carrier moiety for vaccine purposes. We investigated the influence of the position of the inserted epitope within hybrid HBcAg particles on antigenicity and immunogenicity. For this purpose, genes coding for neutralizing epitopes of the pre-S region of the **HBV** envelope proteins were inserted at the amino terminus, the amino terminus through a precore linker sequence, the truncated carboxy terminus, or an internal site of HBcAg by genetic engineering and were expressed in Escherichia coli. All purified hybrid HBc/pre-S polyproteins were particulate. Amino- and carboxy-terminal-modified hybrid HBc particles retained HBcAg antigenicity and immunogenicity. In contrast, insertion of a pre-S(1) sequence between HBcAg residues 75 and 83 abrogated recognition of HBcAg by 5 of 6 anti-HBc monoclonal antibodies and diminished recognition by human polyclonal anti-HBc. Predictably, HBcAg-specific immunogenicity was also reduced. With respect to the inserted epitopes, a pre-S(1) epitope linked to the amino terminus of HBcAg was not surface accessible and not immunogenic. A pre-S(1) epitope fused to the amino terminus through a precore linker sequence was surface accessible and highly immunogenic. A carboxy-terminal-fused pre-S(2) sequence was also surface accessible but

weakly immunogenic. Insertion of a pre-S(1) epitope at the internal site resulted in the most efficient anti-pre-S(1) antibody response. Furthermore, immunization with hybrid HBc/pre-S particles exclusively primed **T-helper** cells specific for HBcAg and not the inserted epitope. These results indicate that the position of the inserted B-cell epitope within HBcAg is critical to its immunogenicity.

L36 ANSWER 14 OF 17 MEDLINE on STN
88144485. PubMed ID: 2449694. Hepatitis B synthetic immunogen comprised of **nucleocapsid** T-cell sites and an envelope B-cell epitope. Milich D R; Hughes J L; McLachlan A; Thornton G B; Moriarty A. (Department of Molecular Biology, Research Institute of Scripps Clinic, La Jolla, CA 92037.) Proceedings of the National Academy of Sciences of the United States of America, **(1988 Mar)** 85 (5) 1610-4. Journal code: 7505876. ISSN: 0027-8424. Pub. country: United States. Language: English.
AB Previous studies located T-cell recognition of the **nucleocapsid** of the **hepatitis B virus** (HBcAg) to residues 120-140 in mice bearing the H-2s or H-2b haplotypes. Herein, we demonstrate that B10.S (H-2s) and B10 (H-2b) H-2 congenic strains recognize distinct T-cell sites within the p120-140 (a synthetic peptide corresponding to residues 120-140 of HBcAg) sequence defined by p120-131 and p129-140, respectively. Peptide p120-131 stimulates B10.S HBcAg-primed T cells, and reciprocally p120-131-primed T cells recognize HBcAg. Similarly, the p129-140 sequence is a T-cell recognition site relevant to the native HBcAg in the B10 strain. It is also shown that these 12-residue peptides efficiently prime **T-helper** cells, which are capable of eliciting antibody production to HBcAg in vivo. These observations prompted us to examine the ability of the HBcAg-specific p120-140 sequence to function as a T-cell carrier moiety as a component of a totally synthetic hepatitis B vaccine. For this purpose a synthetic B-cell epitope from the pre-S(2) region (p133-140) of the viral envelope was chosen because this sequence represents a dominant antibody-binding site of the envelope. Immunization of B10.S and B10 strains with the synthetic composite peptide c120-140-(133-140) elicited anti-peptide antibody production, which was crossreactive with the native viral envelope. Furthermore, c120-140-(133-140) immunization primed p120-131-specific T cells in the B10.S strain and p129-140-specific T cells in the B10 strain, which recognized HBcAg and provided **T-helper** cell function for anti-envelope antibody production in vivo. These results demonstrate the feasibility of constructing complex synthetic immunogens that represent multiple proteins of a pathogen and are capable of engaging both T and B cells relevant to the native antigens.

L36 ANSWER 15 OF 17 MEDLINE on STN
88014210. PubMed ID: 2443856. Antibody production to the **nucleocapsid** and envelope of the **hepatitis B virus** primed by a single synthetic T cell site. Milich D R; McLachlan A; Thornton G B; Hughes J L. (Department of Molecular Biology, Scripps Clinic and Research Foundation, La Jolla, California 92037.) Nature, **(1987 Oct 8-14)** 329 (6139) 547-9. Journal code: 0410462. ISSN: 0028-0836. Pub. country: ENGLAND: United Kingdom. Language: English.
AB The **nucleocapsid** (HBcAg) of the **hepatitis B virus** (**HBV**) can induce antibody responses via both a T-cell dependent and a T-cell independent pathway and is highly immunogenic during infection. We have examined the T-cell determinants of the antigen and find that HBcAg-specific **helper** T cells (TH) can help B cells produce antibody against envelope (HBsAg) antigens as well as HBcAg, even though these antigens are found on separate molecules. We have also been able to prime **helper** T cells with synthetic T-cell epitopes of HBcAg; **helper** cells primed with a single synthetic epitope can induce B cells to produce antibody that reacts with multiple HBsAg epitopes. One problem with the development of an **HBV** vaccine is that some vaccinees and patients do not respond to HBsAg directly; our results indicate that this problem can be circumvented using the response to HBcAg.

L36 ANSWER 16 OF 17 MEDLINE on STN
87309833. PubMed ID: 2957446. Intrahepatic, **nucleocapsid** antigen-specific T cells in chronic active hepatitis B. Ferrari C; Penna A; Giuberti T; Tong M J; Ribera E; Fiaccadori F; Chisari F V. Journal of immunology (Baltimore, Md. : 1950), **(1987 Sep 15)** 139 (6) 2050-8. Journal code: 2985117R. ISSN: 0022-1767. Pub. country: United States. Language: English.
AB Hepatitis B core antigen (HBcAg)-specific T cell lines were established from hepatic lymphomononuclear cells derived from five patients with chronic active hepatitis B. No **hepatitis B virus** envelope antigen-specific cell lines were established. Proliferation in response to recombinant and native HBcAg, but not to native hepatitis B surface antigen containing the pre-S(2) region, confirmed the specificity of the five T cell lines. All cell lines represented mixed populations of CD4+ and CD8+ T cells. The CD4+ subset provided antigen-specific help to

autologous B cells with respect to anti-HBc production and to CD8+ cells with regard to HBcAg-induced proliferation and suppressor activity. The CD8+ subset contained suppressor cells that selectively inhibited the proliferative response of autologous HBcAg-specific CD4+ cells without inhibiting CD4+ cells of unrelated specificity (tetanus toxoid). Moreover, the CD8+ cells were also capable of suppressing HBcAg-stimulated antibody to HBcAg production without showing inhibition of total immunoglobulin production stimulated by pokeweed mitogen. The cytotoxic potential of the T cell lines was established in a lectin-dependent cytotoxicity system; natural killer cytotoxicity was completely absent. Our data suggest that the lesional T cells present at the site of hepatocellular injury in chronic active hepatitis B are primarily HBcAg-specific lymphocytes of the **helper** and suppressor/cytotoxic phenotypes and that both are functionally competent.

L36 ANSWER 17 OF 17 MEDLINE on STN
87069934. PubMed ID: 3491425. The **nucleocapsid** of **hepatitis B virus** is both a T-cell-independent and a T-cell-dependent antigen.
Milich D R; McLachlan A. Science, **(1986 Dec 12)** 234 (4782) 1398-401.
Journal code: 0404511. ISSN: 0036-8075. Pub. country: United States.
Language: English.
AB One characteristic of the immune response during **hepatitis B virus** (**HBV**) infection in humans is the vigorous production and subsequent persistence of antibodies of immunoglobulin (Ig) classes M and G to the **nucleocapsid** antigen (HBcAg). In this study HBcAg was shown to be similarly immunogenic in mice. When injected into athymic (nude) B10.BR and athymic BALB/c mice, HBcAg induced IgM and IgG class antibodies to HBc in spite of the absence of T cells in nude mice. In euthymic mice, HBcAg efficiently stimulated T-cell proliferation in vitro and **helper** T-cell function in vivo. The dual functions of HBcAg as a T-cell-independent and a T-cell-dependent antigen may explain its enhanced immunogenicity. Denaturation of HBcAg yields a nonparticulate antigen designated HBeAg; when HBeAg was used as the immunogen, antibody production required **helper** T-cell function. Although HBcAg and HBeAg are serologically distinct, they are structurally related, and in these experiments were highly cross-reactive at the T-cell level. These results suggest that the elevated levels of IgM antibodies to HBc and the enhanced immunogenicity of HBcAg during **HBV** infection in humans reflect the ability of HBcAg to directly activate B cells to produce antibodies to HBc in the presence or absence of HBcAg- or HBeAg-sensitized T cells.

=> d his

(FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
E SIA CHARLES/IN
L1 16 S E3-E5
E KLEIN MICHEL/IN
L2 177 S E3-E5
L3 47 S L2 AND (T-HELPER)
L4 2 S L3 AND (T-HELPER/CLM)

FILE 'WPIDS' ENTERED AT 16:13:39 ON 06 SEP 2005
E SIA CHARLES/IN
E SIA C D Y/IN
L5 19 S E1 OR E3
E KLEIN M/IN
L6 264 S E3
L7 4 S L6 AND (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L8 4 S L7 NOT L5

FILE 'MEDLINE' ENTERED AT 16:19:14 ON 06 SEP 2005
E SIA C D Y/AU
L9 19 S E1 OR E8

FILE 'USPATFULL' ENTERED AT 16:20:38 ON 06 SEP 2005
L10 40963 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L11 13497 S L10 AND (T-HELPER OR CD4?)
L12 3031 S L11 AND (T-HELPER)
L13 943 S L12 AND AY<2000
L14 45 S L13 AND (T-HELPER/CLM)
L15 18902 S L10 AND REV
L16 2167 S L15 AND (CTL OR CTL EPITOPE?)
L17 1836 S L16 AND (EPITOPE?)
L18 352 S L17 AND (CTL/CLM OR CYTOTOXIC/CLM)
L19 84 S L18 AND AY<2000
L20 10 S L19 AND REV/CLM

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     FILE 'MEDLINE' ENTERED AT 16:35:30 ON 06 SEP 2005

     FILE 'USPATFULL' ENTERED AT 16:35:51 ON 06 SEP 2005
L21       10942 S (HEPATITIS B VIRUS OR HBV)
L22         859 S L21 AND (NUCLEOCAPSID)
L23         294 S L22 AND (CTL OR CYTOTOXIC T LYMPHOCYTE?)
L24           0 S L23 AND CLP-243
L25          99 S L23 AND AY<2000

     FILE 'MEDLINE' ENTERED AT 16:41:11 ON 06 SEP 2005
L26      155962 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L27        1451 S L26 AND REV
L28          58 S L27 AND EPITOPE?
L29          29 S L28 AND (CTL OR CYTOTOXIC)
L30          12 S L29 AND PY<2000
L31           5 S L28 AND (T-HELPER OR HELPER)
L32           2 S L31 AND PY<2000
L33       24917 S (HBV OR HEPATITIS B VIRUS)
L34         332 S L33 AND (NC OR NUCLEOCAPSID)
L35          20 S L34 AND (T-HELPER OR HELPER)
L36          17 S L35 AND PY<2000

=> file uspatful
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                13.61     371.40

FILE 'USPATFULL' ENTERED AT 16:51:53 ON 06 SEP 2005
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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 6 Sep 2005 (20050906/PD)
FILE LAST UPDATED: 6 Sep 2005 (20050906/ED)
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USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

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>>>  applications.  USPAT2 contains full text of the latest US         <<<
>>>  publications, starting in 2001, for the inventions covered in     <<<
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>>>  publications.  The publication number, patent kind code, and      <<<
>>>  publication date for all the US publications for an invention     <<<
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>>>  /PK, etc.                                                         <<<

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>>>  classifications, or claims, that may potentially change from      <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s us5840303/pn
L37           1 US5840303/PN

=> d l37,ti,clm

L37  ANSWER 1 OF 1  USPATFULL on STN
TI     Peptides for inducing cytotoxic T lymphocyte responses to hepatitis B
       virus
CLM    What is claimed is:
       1. A peptide containing at least one cytotoxic T lymphocyte (CTL)
       epitope, the peptide comprising from eight to seventeen amino acids and
       including at least seven contiguous amino acids of a corresponding
       portion of HBpol803-811 having the following sequence: VIII
       (HBpol803-811) (Seq. ID No. 10) Ser-Leu-Tyr-Ala-Asp-Ser-Pro-Ser-
       Val.
```

2. The peptide of claim 1, which is VIII ($HBpol_{803-811}$) [Seq. ID No. 10]Ser-Leu-Tyr-Ala-Asp-Ser-Pro-Ser-Val.

3. An immunogenic polypeptide composition comprising the peptide of claim 1 joined to and a second immunogenic peptide to form a heteropolymer.

4. The immunogenic polypeptide composition of claim 3, wherein the second immunogenic peptide elicits a immune response specific for hepatitis B virus.

5. The immunogenic polypeptide composition of claim 4, wherein the second immunogenic peptide elicits a T-helper cell mediated response.

6. An immunogenic conjugate composition comprising the peptide of claim 1 conjugated to a immunogenic lipid carrier.

7. The immunogenic conjugate composition of claim 6, wherein the lipid carrier enhances a human T-lymphocyte response.

8. The immunogenic conjugate composition of claim 7, wherein the lipid carrier is a lipopeptide.

9. A peptide according to claim 1 which is expressed by a DNA construct that comprises a transcriptional promotor, a DNA sequence encoding said peptide, and a transcription terminator, each operably linked for expression of said peptide.

10. The peptide according to claim 1 comprising from eight to twelve amino acid residues.

11. The peptide according to claim 10 comprising nine or ten amino acid residues.

12. The peptide according to claim 11, which is ($HBpol_{803-811}$) [Seq. ID No. 10]Ser-Leu-Tyr-Ala-Asp-Ser-Pro-Ser-Val.

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=> s us5993819/pn
L38          1 US5993819/PN

=> d 138,ti,clm

L38  ANSWER 1 OF 1  USPATFULL on STN
TI     Synthetic vaccine for protection against human immunodeficiency virus
       infection
CLM    What is claimed is:
       1. A peptide of the general formula Th-SP10(X) wherein: Th represents an
       amino acid sequence comprising a T helper epitope; SP10 represents a
       peptide consisting essentially of an amino acid sequence of up to about
       35 units in length and corresponding to at least one antigenic
       determinant of the envelope glycoprotein of HIV recognized by B
       lymphocytes, said peptide being capable, when covalently linked to a
       carrier molecule, of inducing in a mammal the production of high titers
       of type-specific antibodies against HIV; and (X) represents an amino
       acid sequence corresponding to a HIV protein sequence recognized by MHC
       Class I or Class II restricted cytotoxic T cells.

       2. A peptide of the general formula: Th-SP10 wherein: Th represents an
       amino acid sequence comprising a T helper epitope; and SP10 represents a
       peptide consisting essentially of an amino acid sequence of up to about
       35 units in length and corresponding to at least one antigenic
       determinant of the envelope glycoprotein of HIV recognized by B
       lymphocytes, said peptide being capable, when covalently linked to a
       carrier molecule, of inducing in a mammal the production of high titers
       of type-specific antibodies against HIV.


=> s l38 and lipopeptide
         677 LIPOPEPTIDE
L39        0 L38 AND LIPOPEPTIDE

=> s l38 and palmit?
       60744 PALMIT?
L40        0 L38 AND PALMIT?

=> s l38 and cholester?
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         50998 CHOLESTER?
L41          1 L38 AND CHOLESTER?

=> d l41,kwic

L41  ANSWER 1 OF 1  USPATFULL on STN
PI     US 5993819              19991130                          <--
DETD                  . . .  ND       31
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Liposomes were prepared using Octylglucoside 7% (0.7 g/10 ml PBS) Lalpha dioleoyl lecithin, 20 mg/ml, T1SP10MN(A) peptide and **cholesterol** 3.1 mg/m using standard techniques (Mimms et al. Biochemistry 20:833, 1981; Liposome Technology Vol. III Ed. G. Gregoriadis Chapter 14. . .

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=> s us5756666/pn
L42          1 US5756666/PN

=> d l42,ti,clm

L42  ANSWER 1 OF 1  USPATFULL on STN
TI     Peptides capable of inducing immune response to HIV
CLM    What is claimed is:
```

1. A peptide fragment of an HIV protein which has a length of 8 to 11 amino acid residues, binds to HLA, and induces production of cytotoxic T lymphocytes against cells infected with HIV, wherein the second amino acid residue is Pro, and the C-terminal amino acid residue is selected from the group consisting of Tyr, Leu, Ile, Met, Phe and Ala.

2. The peptide fragment of claim 18, wherein the HIV protein is selected from the group consisting of pol, gag, vpr, vif, rev and env.

3. The peptide fragment of claim 1 having the sequence of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 or 24.

4. A peptide fragment of an HIV protein which has a length of 8 to 11 amino acid residues, binds to HLA, and induces production of cytotoxic T lymphocytes against cells infected with HIV, wherein the second amino acid residue is selected from the group consisting of Pro, Ala and Gly, and the C-terminal amino acid residue is selected from the group consisting of Ile, Leu, Val, Phe and Met.

5. The peptide fragment of claim 4, wherein the HIV protein is selected from the group consisting of pol, gag, vpr, vif, rev and env.

6. The peptide fragment of claim 3 having the sequence of SEQ ID NO: 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45 or 46.

7. A peptide fragment of an HIV protein which has a length of 8 to 11 amino acid residues, binds to HLA, and induces production of cytotoxic T lymphocytes against cells infected with HIV, wherein the second amino acid residue is selected from the group consisting of Leu, Val, Tyr, and Phe, and the C-terminal amino acid residue is Arg.

8. The peptide fragment of claim 7, wherein the HIV protein is selected from the group consisting of pol, gag, vpr, vif, rev and env.

9. The peptide fragment of claim 5 having the sequence of SEQ ID NO: 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62 or 63.

10. An immunogenic composition, comprising the peptide fragment of claim 1 and a pharmaceutically acceptable carrier and/or a pharmaceutically acceptable diluent.

11. An immunogenic composition, comprising the peptide fragment of claim 4 and a pharmaceutically acceptable carrier and/or a pharmaceutically acceptable diluent.

12. An immunogenic composition, comprising the peptide fragment of claim 7 and a pharmaceutically acceptable carrier and/or a pharmaceutically acceptable diluent.

13. A method of inducing cytotoxic T lymphocytes comprising contacting the peptide fragment of claim 1 with peripheral blood lymphocytes having HLA-B antigens.

14. A method of inducing cytotoxic T lymphocytes comprising contacting

the peptide fragment of claim 4 with peripheral blood lymphocytes having HLA-B antigens.

15. A method of inducing cytotoxic T lymphocytes comprising contacting the peptide fragment of claim 7 with peripheral blood lymphocytes having HLA-A antigens.

16. A method of inducing cytotoxic T lymphocytes, comprising administering the peptide fragment of claim 1 to a patient in need thereof.

17. A method of inducing cytotoxic T lymphocytes, comprising administering the peptide fragment of claim 4 to a patient in need thereof.

18. A method of inducing cytotoxic T lymphocytes, comprising administering the peptide fragment of claim 7 to a patient in need thereof.

19. A DNA encoding the peptide fragment of claim 1.

20. A DNA encoding the peptide fragment of claim 4.

21. A DNA encoding the peptide fragment of claim 7.

22. A method of screening peptides for induction of cytotoxic T lymphocytes comprising: contacting peptide fragments of an HIV protein having a length of 8 to 11 amino acid residues with cells that are deficient in transporter associated protein antigen and express HLA class I antigen; selecting peptides which maintain the expression of the HLA class I antigen on the cells; and contacting the selected peptides with peripheral blood lymphocytes of a patient infected with HIV.

=> s us6024965/pn
L43 1 US6024965/PN

=> d l43,ti,clm

L43 ANSWER 1 OF 1 USPATFULL on STN
TI Induction of REV and TAT specific cytotoxic T-cells for prevention and treatment of human immunodeficiency virus (HIV) infection
CLM What is claimed is:
1. An immunogenic composition which consists essentially of: (1) at least one cytotoxic T-cell epitope selected from the group consisting of the cytotoxic T-cell epitope of the Rev protein and the cytotoxic T-cell epitope of the Tat protein effective to generate a specific cytotoxic T-cell response to the Rev and/or Tat proteins of an immunodeficiency virus, or (2) a vector encoding at least one cytotoxic T-cell epitope selected from the group consisting of the cytotoxic T-cell epitope of the Rev protein and the cytotoxic T-cell epitope of the Tat protein effective to generate a specific cytotoxic T-cell response to the Rev and/or Tat proteins of an immunodeficiency virus.

2. The immunogenic composition of claim 1 wherein said immunodeficiency virus is human immunodeficiency virus.

3. The immunogenic composition of claim 2 wherein there is present a cytotoxic T-cell epitope from the Rev protein and a cytotoxic T-cell epitope from the Tat protein.

=> s us6319666/pn
L44 1 US6319666/PN

=> d l4,ti,clm

L4 ANSWER 1 OF 2 USPATFULL on STN
TI Multi oligosaccharide glycoconjugate bacterial meningitis vaccines
CLM What is claimed is:
1. A method of forming a multivalent immunogenic molecule tag comprising: treating at least two different carbohydrate molecules to obtain carbohydrate fragments thereof, forming a lysine-branching peptide containing at least two different **T-helper** cell epitopes as a carrier molecule anchored to a polymeric anchor wherein at least two carrier peptide segments have different terminal protecting groups, selectively removing one-of the protecting groups, coupling a first one

of the oligosaccharide fragments to the unprotected carrier peptide segment, selectively removing another of the protecting groups, coupling a second one of the oligosaccharide fragments to the unprotected carrier peptide segment, and cleaving the resulting molecule from the polymeric anchor.

2. The method of claim 1 wherein said carbohydrate molecules are capsular polysaccharides of a bacteria and oligosaccharide fragments of said capsular polysaccharide are selected sized from about 2 to about 5 kDa.

3. The method of claim 2 wherein said capsular oligosaccharide fragments are capsular oligosaccharide fragments of Streptococcus pneumoniae.

4. The method of claim 3 wherein said capsular oligosaccharide fragments are derived from at least two capsular polysaccharides of S. pneumoniae serotypes 1, 4, 5, 6B, 9V, 14, 18C, 19F and 23F.

5. The method of claim 2 wherein said capsular polysaccharide fragments are capsular oligosaccharide fragments of Neisseria meningitidis.

6. The method of claim 5 wherein said oligosaccharide fragments are derived from at least two capsular polysaccharides of N. meningitidis Group A, B, C, W-135 and Y.

7. The method of claim 1 wherein said lysine-branching peptides are derived from protein fragments of S. pneumoniae.

8. The method of claim 1 wherein said lysine-branching peptides contain at least three different **T-helper** cell epitopes.

=> d l44,ti,clm

L44 ANSWER 1 OF 1 USPATFULL on STN
TI Induction of REV and TAT specific cytotoxic T-cells for prevention and treatment of human immunodeficiency virus (HIV) infection
CLM What is claimed is:
1. A method of treatment of a host, which comprises: stimulating in the host a specific cytotoxic T-cell response which is specific for the Rev and/or Tat proteins of the immunodeficiency virus.

2. The method of claim 1 wherein the host is a human host and said immunodeficiency virus is human immunodeficiency virus.

3. The method of claim 2 wherein said cytotoxic T-cell response is stimulated by administering to the host at least one T-cell epitope selected from the Rev and Tat protein of HIV or a vector encoding the at least one cytotoxic T-cell epitope.

4. A method of treatment of a host, which comprises: selectively stimulating a protective Rev and/or Tat protein-specific cytotoxic T-cell response in said host.

5. The method of claim 4 wherein said immunodeficiency virus is human immunodeficiency virus and said host is a human host.

6. The method of claim 5 wherein said selective stimulation is effected by administering to the host at least one T-cell epitope selected from the Rev and Tat proteins of HIV.

7. The method of claim 6 wherein said at least one T-cell epitope is administered by administering the Rev and/or Tat HIV protein or a homolog thereof in which amino acids have been deleted, inserted or substituted without essentially detracting from the immunological properties thereof with a pharmaceutically-acceptable carrier therefor.

8. The method of claim 6 wherein said at least one T-cell epitope is administered by administering a synthetic peptide having an amino acid sequence corresponding to the T-cell epitope or a homolog thereof in which amino acids have been deleted, inserted or substituted without essentially detracting from the immunological properties thereof with a pharmaceutically-acceptable carrier therefor.

9. The method of claim 5 wherein said selective stimulation is effected by administering to the host a vector encoding at least one cytotoxic T-cell epitope selected from the Rev and Tat protein of HIV.

10. The method of claim 9 wherein said vector comprises a recombinant vector which expresses the Rev and/or Tat protein of HIV or a homolog thereof in which amino acids have been deleted, inserted or substituted without deviating from the immunological properties thereof.

11. At least one cytotoxic T-cell epitope selected from the Rev and Tat proteins of HIV or a vector encoding the at least one cytotoxic T-cell epitope when used as a medicament.

12. The T-cell epitope of claim 11 which is provided by the Rev and/or Tat protein of HIV or a homology thereof in which amino acids have been deleted, inserted or substituted without essentially detracting from the immunological properties thereof, in combination with a pharmaceutically-acceptable carrier.

13. The T-cell epitope of claim 11 which is provided by a recombinant vector or a nucleic acid molecule which expresses the Rev and/or Tat protein of HIV, or a homolog thereof in which amino acids have been deleted, inserted or substituted without essentially detracting from the immunological properties thereof.

14. The T-cell epitope of claim 11 which is provided by a synthetic peptide having an amino acid sequence corresponding to the T-cell epitope, or a homolog thereof in which amino acids have been deleted, inserted or substituted without essentially detracting from the immunological properties thereof, in combination with a pharmaceutical carrier therefor.

=> d l44,cbib

L44 ANSWER 1 OF 1 USPATFULL on STN
2001:208643 Induction of REV and TAT specific cytotoxic T-cells for prevention and treatment of human immunodeficiency virus (HIV) infection.
Van Baalen, Carel A., Zeewolde, Netherlands
Osterhaus, Albertus D.M.E., Bunnik, Netherlands
Erasmus Universiteit Rotterdam, Rotterdam, Netherlands (non-U.S. corporation)
US 6319666 B1 20011120 <--
WO 9817309 19980430
APPLICATION: US 1999-284651 19990617 (9)
WO 1997-IB1402 19971017 19990617 PCT 371 date 19990617 PCT 102(e) date
DOCUMENT TYPE: Utility; GRANTED.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s us4882145/pn
L45 1 US4882145/PN

=> d l45,ti,clm

L45 ANSWER 1 OF 1 USPATFULL on STN
TI T cell epitopes of the hepatitis B virus nucleocapsid protein
CLM What is claimed is:
1. A T cell stimulating polypeptide consisting essentially of an amino acid residue sequence corresponding to a formula selected from the group consisting of: (a) MDIDPYKEFGATVELLSFLP, (b) RDLLDT.ASALYREALESPEHCSPHH, (c) TWVGVNLEDPASRDLVVSYVNTNMG, (d) VVSYVNTNMGLKFRQL, (e) VVSYVNTNMGLK, (f) LLWFHISCLTFGRETVIEYLV, (g) LLWFHISCLTF, (h) VSFGVWIRTPPAYRPPNAPIL, (i) VSFGVWIRTPPA, (j) PPAYRPPNAPIL, and (k) WIRTPPAYRPPN.

2. A method of enhancing the immunogenicity of a polypeptide immunogen comprising operatively linking by a peptide bond to said polypeptide immunogen a T cell stimulating polypeptide having an amino acid residue sequence represented by a formula selected from the group consisting of: (a) MDIDPYKEFGATVELLSFLP, (b) RDLLDTASALYREALESPEHCSPHH, (c) TWVGVNLEDPASRDLVVSYVNTNMG, (d) VVSYVNTNMGLKFRQL, (e) VVSYVNTNMGLK, (f) LLWFHISCLTFGRETVIEYLV, (g) LLWFHISCLTF, (h) VSFGVWIRTPPAYRPPNAPIL, (i) VSFGVWIRTPPA, (j) PPAYRPPNAPIL, and (k) WIRTPPAYRPPN.

=> d his

(FILE 'HOME' ENTERED AT 15:24:35 ON 06 SEP 2005)

FILE 'USPATFULL' ENTERED AT 15:24:55 ON 06 SEP 2005
E SIA CHARLES/IN

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L1           16 S E3-E5
                E KLEIN MICHEL/IN
L2          177 S E3-E5
L3           47 S L2 AND (T-HELPER)
L4            2 S L3 AND (T-HELPER/CLM)

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                E SIA C D Y/IN
L5           19 S E1 OR E3
                E KLEIN M/IN
L6          264 S E3
L7            4 S L6 AND (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L8            4 S L7 NOT L5

     FILE 'MEDLINE' ENTERED AT 16:19:14 ON 06 SEP 2005
                E SIA C D Y/AU
L9           19 S E1 OR E8

     FILE 'USPATFULL' ENTERED AT 16:20:38 ON 06 SEP 2005
L10       40963 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L11       13497 S L10 AND (T-HELPER OR CD4?)
L12        3031 S L11 AND (T-HELPER)
L13         943 S L12 AND AY<2000
L14          45 S L13 AND (T-HELPER/CLM)
L15       18902 S L10 AND REV
L16        2167 S L15 AND (CTL OR CTL EPITOPE?)
L17        1836 S L16 AND (EPITOPE?)
L18         352 S L17 AND (CTL/CLM OR CYTOTOXIC/CLM)
L19          84 S L18 AND AY<2000
L20          10 S L19 AND REV/CLM

     FILE 'MEDLINE' ENTERED AT 16:35:30 ON 06 SEP 2005

     FILE 'USPATFULL' ENTERED AT 16:35:51 ON 06 SEP 2005
L21       10942 S (HEPATITIS B VIRUS OR HBV)
L22         859 S L21 AND (NUCLEOCAPSID)
L23         294 S L22 AND (CTL OR CYTOTOXIC T LYMPHOCYTE?)
L24           0 S L23 AND CLP-243
L25          99 S L23 AND AY<2000

     FILE 'MEDLINE' ENTERED AT 16:41:11 ON 06 SEP 2005
L26      155962 S (HIV OR HUMAN IMMUNODEFICIENCY VIRUS)
L27        1451 S L26 AND REV
L28          58 S L27 AND EPITOPE?
L29          29 S L28 AND (CTL OR CYTOTOXIC)
L30          12 S L29 AND PY<2000
L31           5 S L28 AND (T-HELPER OR HELPER)
L32           2 S L31 AND PY<2000
L33       24917 S (HBV OR HEPATITIS B VIRUS)
L34         332 S L33 AND (NC OR NUCLEOCAPSID)
L35          20 S L34 AND (T-HELPER OR HELPER)
L36          17 S L35 AND PY<2000

     FILE 'USPATFULL' ENTERED AT 16:51:53 ON 06 SEP 2005
L37           1 S US5840303/PN
L38           1 S US5993819/PN
L39           0 S L38 AND LIPOPEPTIDE
L40           0 S L38 AND PALMIT?
L41           1 S L38 AND CHOLESTER?
L42           1 S US5756666/PN
L43           1 S US6024965/PN
L44           1 S US6319666/PN
L45           1 S US4882145/PN

=> log off
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y
STN INTERNATIONAL LOGOFF AT 16:58:24 ON 06 SEP 2005
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